

# AMERICAN RAILROAD JOURNAL.

## STEAM NAVIGATION, COMMERCE, MINING, MANUFACTURES.

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tion and future history of the former, in what has been the past history and experience of other roads.

Now if there be any one fact which stands out with a marked prominence in the history of railroads, it is, that their cost *always* exceeds the estimates. This is inevitable; first, for the reason that estimates never do, and never can, cover all the items of expenditure; and, secondly, because the estimates are always below the cost. No foresight can include all the items that make up the aggregate, and few engineers have the courage to put their estimates up to their real convictions of the cost of a piece of work. These facts have tended to throw more discredit upon railroads than all other causes. The public, trusting to the representations made to them, are induced to take stock in a railroad. They are told they can have a road, equipped to their hands, for so much money. The money is subscribed, paid in and expended, but instead of being presented with a finished work, according to expectation, the stockholders are frequently called upon for new subscriptions of stock, or issue of bonds, and in many cases the call is so often repeated, that the first subscription, which was supposed to be sufficient to complete the road, is completely buried under the weight of subsequent loans. The history of the Vermont Central railroad is a case exactly in point: an emphatic illustration of the truth of the above remarks. If that road accomplishes no other good, it will be of some use in showing the tendency into which all are likely to fall, and in warning others against the misfortunes which have fallen upon that road.

But the history of the Erie road presents sufficient proof of the truth of what we have said. There has been a wide discrepancy between the promise and performance here. But this failure to realise promises held out, implies no want of integrity, nor should it impeach the capacity of those who made them. Such persons acted under the guidance of the best lights that could be obtained. They based their opinion upon *given* data, and not upon what the *future* might disclose. Time brings new facts to light, and makes additional demands, which could not have been foreseen, nor inferred from past experience.

Something over a year since, and some six months before the opening of the Erie railroad, an estimate was made of the probable amount necessary to complete it. This amount was secured. The road was opened according to promise, and its earnings

have we think exceeded expectation. In these respects, all has been realised that was promised. Now we apprehend that no person believes that the sum stated as necessary to complete the road was adequate to this purpose. The road has been *opened, not completed*, nor have we any doubt that the company has been compelled to incur a floating debt to a considerable amount, to place the road in its present condition; and we know that a very large sum beyond the present means of the company, will be required to place the road in a situation to realise its highest usefulness, and secure the greatest profit to the stockholders.

We assume these inferences to be facts. We go as far as any one to award the meed of praise to the energy and perseverance of the directors and managers of this road, but the Erie is by no means free from the conditions which we find common to all other lines. It has had its full share of obstacles and difficulties to encounter, and the result in this case will present us the aggregate results of the experience of other roads.

The company, in our opinion, is not only delinquent upon the old, but is now called upon to make new expenditures. The first and most pressing of these is a double track. This the company *must have* to do a profitable business. The single track, when pushed to its utmost capacity, is hardly adequate to the business now pressing upon it. Without an additional one, any great increase of business, instead of adding to the income, would tend to cripple the operations of the road, by the confusion and disorder it would necessarily produce in the running of the trains. If, therefore, what is now offering is equal to the capacity of the road, what will its condition be, when the extensions west, and its numerous tributaries on the north, shall be completed? Early in the spring, the Lake Shore road will be completed to Cleveland. Within a year from this time, the Buffalo and New York City, and the Buffalo and Conhocton Valley roads, will be completed. These are two parallel roads to Lake Erie. The Canandaigua and Corning road is pushing forward to the same terminus. A road is also in progress from Sodus Bay on Lake Ontario, which will be another tributary to the Erie. Here then are four lines of railroad all falling upon the Erie road, each of which, in our opinion, will bring a greater amount of business to the latter than the main trunk beyond Corning. From that place, the Erie road will have in the above

### American Railroad Journal.

Saturday, December 20, 1851.

#### New York and Erie Railroad.

There is a great deal of speculation afloat as to the probability of the payment of a January dividend by the New York and Erie railroad. We are not in the secrets of the company, and know nothing personally about the matter, but we presume that a dividend will be declared, though the constant rumors to the contrary indicate an opinion adverse to such a proceeding on the part of some of the directors. We have no other interest in the question, than that the company should adopt such a course as is best adapted to promote its welfare, and we will briefly state what we believe to be its present condition, and what should be its future policy.

What is the present financial condition of the Erie company? We have never been admitted into the secrets of its management, and if we had been, we probably could not have formed a more correct opinion of its real condition than from a general inference derived from the experience of similar enterprises. The career which the Erie is just commencing, will be the career which older roads have run, and we can read the present condi-

line *four* tracks, instead of *one*. How is all the business of these four to be accommodated after their junction with their main trunk? There is one answer to this, and that is by a *double track*.—The necessity of this is not only demonstrable, but is fully admitted by the directors themselves.

The Erie road, therefore, must have more money, not only to wipe out old scores, but for new works. It is in deciding this matter, that the question of the expediency of declaring a dividend, or applying the money to construction account, comes up.

If the road were the property of one, or a small number of persons, there could be no doubt as to the true course to be pursued. In such a case, the investment should take care of itself, and nothing would be gained by taking the proceeds for another object, and hiring an equal amount of money for investment in the road. We have supposed the interest of such a person, or class, to be entirely beyond the influence of public opinion. But the case is different with the owners of the stock of the Erie. Should there fail to be a dividend, the stock would certainly suffer a very great depreciation. This stock has cost the present holders a high price. Much of it has been purchased for investment. We presume, too, that a very large amount of it is so held, that any serious decline would produce very disastrous results in the business community. The holder of 100 shares of Erie, has what represents a market value of \$8,500. He may have hypothecated this stock, or made it the capital on which his business is based. An excessive depreciation would ruin persons placed in such a situation. The immediate effect of a fall of 20 per cent, would be the same as if an equal amount of property should be destroyed. The consequences would extend themselves to every branch of business and every species of property. The non-payment of a dividend would also bear with great hardship upon those who have invested in the stock relying upon its dividends as their means of support.

If the road, therefore, can make a regular annual dividend of 7 per cent, this will maintain the stock at or near its present figure. So long as the stock can be sustained, there will be little difficulty in obtaining money on bonds. But if the former is suffered to decline, to the extent to which it would fall, without a dividend, the disastrous results which we have pointed out would not only occur, but any new issue of bonds would be unsaleable. The company, in such an event, would find itself in a dilemma from which it might be difficult to extricate itself. We are fully satisfied that it is for the interest of the company, and the public, that the former should play a bold game. The additional amount wanted to construct a double track, would add much more to the value of the stock than its cost. The question then resolves itself into this: how can this sum be raised with the least public loss and inconvenience? The answer is: by paying dividends, and hiring money. This course would keep up the credit of the concern; a different one would ruin it.

In this discussion, we have made no reference to the estimates of the earnings, nor to any opinion as to the real value of the stock. For the purposes of the argument, we have assumed the estimates of the directors in these respects are correct. Upon this assumption, we are confident our views are correct. If the stock shall prove less valuable than the present estimate, it becomes still more important that they should be followed.

In conclusion, we believe that the company would

be much more benefitted by having its true position and wants placed in a straightforward manner before the public, than by the wholesale and senseless puffery of a portion of the city press. If by dint of opportunity, these people should make themselves believed, the company may find itself in a position from which it may be very difficult to recede. If the road "has ceased to be an experiment," and is earning ten per cent on its cost, what on earth does the company want of more money? If in the face of all these statements, apparently acquiesced in by the company, they should come upon the market for another loan, would they not place themselves in a most false and unenviable position?—What statements would be credited, after such a spectacle? There is no necessity for assuming this false position. The road will prove an inestimable one to this city, and the company are entitled to all the money necessary to complete it. They should take and maintain this ground, and not assume false and untenable positions, which they must certainly yield.

#### Plattsburgh and Montreal Railroad

The Plattsburgh and Montreal railroad company was organized on the 28th March, 1850, but no part of the construction of the road was commenced until about the 1st of August last.

This road is located entirely within the county of Clinton, and extends from the village of Plattsburgh, in a northerly direction, through the towns of Beekmantown, Chazy and Moores, to the Canada boundary line, at a point about two miles north of the village of Moores, where it will connect with the Lakes, St. Louis and Province Line railroad, [now in the course of rapid construction,] and extending from thence to Caughnawaga, on the south bank of the river St. Lawrence. A connection of the latter place with the city of Montreal will be established by means of a ferryage, of a little over a mile, across the St. Lawrence from Caughnawaga to Lachine, on the Island of Montreal, and from thence communicating directly with the city of Montreal and Lachine railroad, now in full operation. The entire line of railroad from Plattsburgh to Caughnawaga, when completed, will be fifty two miles. The entire line from the Champlain to the St. Lawrence, is designed to be ready for the track by the 1st of May, and to be in complete running order by the 1st of August next. No portion of the road is in operation.

Amount of capital, as by charter and association..... \$500,000 00  
Amount of stock subscribed..... 78,450 00  
Total amount of capital paid in..... 12,460 00  
Amount expended for grading and masonry..... 2,647 20  
" " land, damages and fences..... 5,054 35  
" " engineering, etc... 3,080 28

#### Projected Tubular Bridge across the Mersey.

Mr. Cunningham, architect, of Liverpool, has submitted a project to the directors of the various railway companies interested in the communication between Birkenhead and Liverpool, for a railway to cross the Mersey, and thus connect Birkenhead and Liverpool for all kinds of transit. Mr. Cunningham proposes to sink an iron tube in the bed of the river, buried so completely below the surface thereof, that there would be no more obstruction to the currents than at present. The tube would have perpendicular sides and an arched roof. It would be placed in a prepared bed, and would be protected outwardly by various contrivances. Internally, there would be two lines of rails running on each side of the tube, with a passage in the middle for pedestrians. The entire work, it is estimated, would cost not more than £250,000. It would form a complete means of transit for goods, railway passengers, and pedestrians between Liverpool and Birkenhead, besides opening a communication to and from Liverpool for all railways feeding the Cheshire junction.—*London paper.*

#### From the Albany Evening Journal. Railroad Statistics.

We have compiled, from the reports made to the State Engineer and Surveyor, a statement of the operations of the annexed roads, for two years ending with the 30th Sept:—

SYRACUSE AND UTICA RAILROAD.		
Total amount of capital stock paid in.....	\$2,400,000 00	
Funded debt, as by last report.....	48,000 00	
Total amount now of funded and floating debt.....	103,000 00	
Rate of interest paid on debt per annum, 7 per ct.	1850. 1851.	
Cost of road & equipment.....	\$2,490,083 99	\$2,570,981 71
Length of road, 53 miles. Length of double track, including slidings, 57 miles.		
No. passengers carried in cars.....	340,945	449,870
No. tons freight carried in cars.....	(no return)	86,849
Expenses of maintaining road.....	\$62,858 10	\$56,865 21
Expenses of repairs and machinery....	52,008 58	42,193 47
Expenses of operating the road.....	87,869 46	112,950 75
Earnings and Cash Receipts.		
Earnings from passengers.....	\$366,077 07	\$371,935 86
Earnings fm. freight. " other sources.....	90,878 97	111,090 15
Total earnings....	472,775 77	\$498,247 91
Payments, other than for Construction.		
Payments for transportation expenses.	\$202,728 14	\$212,009 43
Payments for interest. " dividends.	9,931 30	2,292 50
	190,280 00	239,435 00

ROCHESTER AND SYRACUSE RAILROAD.		
Capital stock as by charter and articles of association.....	\$5,549,800 00	
Amount of stock subscribed.....	5,549,800 00	
Amount paid in, as by last report...	3,364,979 75	
Total amount now paid in of capital stock.....	4,170,000 00	
Funded debt, as by last report.....	916,000 00	
Total amount now of funded debt...	821,000 00	
Average rate per annum of interest on funded debt, 6 per cent.	1850. 1851.	

Cost of road & equipment.....	\$4,200,000 00	\$4,861,361 94
Length of road, 104 miles.		

No. passengers carried in cars.....	93,561	513,240
Number of tons of freight carried in cars.....	9,604	83,569
Expenses of maintaining road.....	\$16,247 68	\$78,017 23
Expenses of repairs of machinery.....	20,500 34	75,431 91
Expenses of operating the road.....	24,128 56	167,527 02

Earnings and Cash Receipts and Payments.		
Earnings from passengers.....	\$176,991 47	\$690,948 56
Earnings fm. freight. " sources.....	24,444 74	237,530 47
Receipts from passengers.....	none.	22,033 38
Receipts fm. freight. " sources.....	176,991 47	690,948 56
Receipts from other sources.....	none.	212,005 82
Receipts from other sources.....	none.	11,633 38

Payments other than for Construction.		
Payments for transportation expenses.	\$90,876 58	\$320,976 15
Payment for interest. " dividends.	none.	53,790 00
	none.	370,688 99

But a few months prior to the making up of the report in 1850, the Syracuse and Auburn, and the Auburn and Rochester, were consolidated, and it is highly probable that the report of that year embraces only the operation of one of the roads up to the day of consolidation, and the remainder is taken from the operations after they were united.

## LONG ISLAND RAILROAD.

No report was received from the company last year.

Capital stock as by charter.....\$3,000,000 00

Amount of stock subscribed.....3,000,000 00

Amount paid in, as by last report,  
and now paid in.....1,825,148 28

Funded debt, as by last report.....426,670 63

Total amount now of funded debt.....512,957 25

Floating debt, as per last report.....14,535 62

The amount now of floating debt.....7,103 81

Total amount now of funded and  
floating debt.....520,361 06

Average rate per centum of interest  
on funded debt, 6 per cent.

Cost of road and equipment.....2,339,938 64

Length of road, including the Brook-  
lyn and Jamaica, 95 miles.

Number of passengers carried in  
cars.....213,570

Number of tons of freight carried in  
cars.....32,000

Expense of maintaining road.....\$21,768 15

Expenses of repairs of machinery.....26,306 30

Expenses of operating the road.....94,793 05

*Earnings and Cash Receipts and Payments.*

Earnings from passengers.....\$132,289 11

    "    freight.....56,486 06

    "    other sources.....4,531 00

Payments for transportation expen-  
ses.....24,086 85

Payments for interest.....40,682 39

**BUFFALO AND ROCHESTER RAILROAD.**

This road is a consolidation of the Attica and  
Buffalo and the Tonawanda railroads. Separate  
reports have been received last year:-

Capital stock as by charter, and paid  
in.....\$1,825,000 00

Total amount now of funded and  
floating debt.....160,903 00

Average rate of interest per annum  
on funded debt, 6 $\frac{1}{2}$  per cent.

Cost of road and equipment.....2,228,976 89

Length of road, 76 miles; length of  
double track, 1 mile.

Number of passengers carried in  
cars.....322,985

Number of tons of freight carried in  
cars.....48,880

Expenses of maintaining road.....28,089 12

Expenses of repairs of machinery.....23,731 33

Expenses of operating the road.....84,563 07

*Earnings and Cash Receipts.*

Earnings from passengers.....366,245 68

    "    freight.....90,348 50

    "    other sources.....12,500 00

Receipts from other sources, includ-  
ing \$76,000 from sale of bonds....95,098 16

*Payments other than for Construction.*

Payments for transportation expen-  
ses.....133,633 52

Payments for interest.....14,691 45

Payments for dividends.....91,489 16

Payments to sinking fund on acc't.  
of debt to State.....5,000 00

Payments to subscription to the Buf-  
falo and State Line railroad.....89,878 32

Payments for old bonds of Attica and  
Buffalo and Tonawanda railroad..77,500 00

**SCHENECTADY AND TROY RAILROAD.**

Capital stock as by charter and paid  
in.....\$650,000 00

Funded debt, as by last report.....59,700 00

Total amount now of funded debt...73,800 00

Floating debt, as per last report.....1,698 89

Amount now of floating debt.....2,654 96

Total amount now of funded and  
floating debt.....76,454 96

Average rate per annum of interest on funded  
debt, 7 per cent.

	1850.	1851.	<i>Earnings and cash receipts and payments.</i>
Cost of road & equip- ment.....	\$680,046 32	\$681,046 86	Earnings from passengers \$67,979 49 \$83,677 44
Length of road, 20 $\frac{1}{2}$ miles.			"    freight... 4,316 58 6,066 10
Number of passengers carried in cars.....	56,812	70,473	"    other sources 1,000 00 1,000 00
Number of tons of freight carried in cars.....	17,031	15,898	
Expenses of maintain- ing road.....	\$17,069 33	\$9,857 44	<i>Payments other than for construction.</i>
Expenses of repairs of machinery.....	13,278 76	11,970 54	Payments for transporta- tion expenses... \$17,218 66 \$30,549 12
Expenses of operating the road.....	29,919 62	34,440 20	"    for interest... 2,963 00 4,017 36
			"    for dividends... 25,421 00 21,715 22
			<b>OSWEGO AND SYRACUSE RAILROAD.</b>
			Capital stock as by charter and paid in.....\$350,000 00
			Funded debt, as by last report.....200,000 00
			Total amount now of funded debt...200,000 00
			Amount now of floating debt.....10,463 67
			Total amount now of funded and floating debt.....210,413 27
			Average rate per annum of interest on funded debt, 7 per cent.
			Cost of road & equip- ment.....\$571,774 21 \$588,678 02
			Length of road, 35 miles.
			No. passengers carried in cars.....77,161 80,288
			No. of tons of freight carried in cars.....79,49 19,992
			Expenses of maintain- ing road.....\$14,925 63 \$13,068 31
			Expenses of repairs of machinery.....3,019 19 6,007 39
			Expenses of operating the road.....20,998 10 26,087 50
			<i>Earnings and Cash Receipts and Payments.</i>
			Earnings from pas- sengers.....\$57,118 33 \$57,710 51
			Earnings fm. freight... 9,061 32 13,022 61
			Earnings from other sources.....12,191 96 22,682 09
			Receipts from pas- sengers.....57,118 33 57,710 51
			Receipts fm. freight... 9,061 32 12,635 82
			Receipts from other sources.....11,903 20 23,514 71
			<i>Payments other than for Construction.</i>
			Payments for trans- portation expenses... 38,942 92 45,163 20
			Payments for interest... 14,000 00 14,000 00
			"    dividends. 14,001 00 12,250 00
			<b>BUFFALO AND STATE LINE RAILROAD.</b>
			Capital stock by charter.....\$1,000,000 00
			Amount of stock subscribed.....791,000 00
			Amount paid in, as by last report....31,932 45
			Total amount now paid in of capital stock.....605,926 41
			Total amount now of funded and floating debt.....87,177 20
			Average rate per annum of interest on funded debt, 7 per cent.
			<i>Cost of Road and Equipment</i>
			1850. 1851.
For grading and ma- sonry.....	\$18,365 56	\$271,866 81	
Bridges.....	1,656 00	11,477 57	
Superstructure, includ- ing iron.....		152,064 24	
Land, land damage and fences.....	5,589 37	176,341 61	
Engineering & agencies	6,509 22	28,946 39	
Total.....	\$32,120 15	\$640,696 62	
Length of road, 69 miles. Length of road laid, 91-13th miles.			
		<b>HUDSON AND BERKSHIRE RAILROAD.</b>	
Capital stock as by charter.....	\$450,000 00		
Amount of stock subscribed.....	380,000 00		
Amount paid in, as by last report, in- cluding \$50,000 paid by assess- ment.....		425,000 00	
Funded debt, as by last report.....		325,000 00	
Floating debt, as per last report, in- terest due not included.....		49,149 92	
Amount now of floating debt, includ- ing \$3,000 not included last year..		48,000 00	
Total amount now of funded and floating debt.....		373,000 00	
Average rate of interest per ann. on funded debt, 6 $\frac{1}{2}$ per cent.			

	1850.	1851.
Cost of road and equipment.....	\$821,331 45	\$823,331 45
Length of road, 31½ miles.		
Number of passengers carried.....	33,491	45,512
" tons of freight carried.....	23,809	37,145
Expenses of maintaining road.....	\$4,527 00	\$5,564 08
" repairs and machinery.....	2,874 28	2,995 53
" operating the road.....	19,948 60	21,743 79
<i>Earnings and Cash Receipts and Payments.</i>		
Earnings fm. passengers	\$14,771 63	\$19,193 97
" fm. freight.....	25,269 28	36,034 76
" other sources.....	1,000 00	1,000 00
Receipts fm. passengers	14,771 63	19,192 97
" from freight.....	24,769 28	34,500 00
" other sources.....	1,000 00	1,000 00
<i>Payments other than for Construction.</i>		
Payments for transportation expenses.....	\$27,349 88	\$30,403 40
Payments for interest.....	13,191 03	18,050 00
<i>SACKET'S HARBOR AND ELLISBURGH RAILROAD.</i>		
Capital stock, as by charter.....	\$175,000 00	
Amount of capital stock subscribed.....	175,000 00	
Amount paid in, as by last report.....	24,778 68	
Total amount of capital stock now paid in.....	66,613 64	
<i>Cost of Road and Equipment.</i>		
1850.	1851.	
For grading and masonry.....	\$18,639 66	\$50,815 87
Bridges.....		120 00
Superstructure.....	286 65	591 30
Land, land damages and fencing.....	427 72	8,910 29
Engineering, agencies, etc.....	9,534 94	8,480 35
Total.....	\$22,888 97	\$68,917 81
Probable length of road, 17½ miles. No portion in operation.		
<i>ALBANY AND SCHENECTADY (MOHAWK) RAILROAD.</i>		
Amount of capital stock paid in.....	\$1,000,000 00	
Funded debt, as by last report.....	700,000 00	
Total amount now of funded and floating debt.....	716,665 00	
Average rate of interest per annum on debt.....	6½ per cent.	
Cost of road and equipment.....	1,740,449 97	
Length of road about 16½ miles; double track entire length. Miles run by passenger trains, 56,673; do. freight, 44,162.		
1850.	1851.	
Freight carried on cars, tons.....	63,012	92,058
Passengers carried in cars.....	284,279	303,045
Expense of maintaining road.....	\$19,000 10	\$14,273 23
Expense of repairs of machinery.....	5,924 87	9,900 00
Expense of operating road, including canal tolls.....	66,247 01	70,516 12
<i>Earnings and Cash Receipts.</i>		
Earnings fm. passengers	\$132,207 69	\$146,649 61
" from freight.....	70,242 69	87,432 64
" other sources.....	6,134 50	5,765 50
Total earnings.....	\$208,584 88	\$239,847 75
Current expenses.....	91,171 98	103,689 35
Net earnings.....	\$117,412 90	\$136,158 40
For interest.....	38,808 67	49,353 96
For dividends.....	70,000 00	70,000 00
To surplus fund.....	8,604 23	16,804 44
Total amount of surplus fund.....	25,000 00	41,804 44

The rate of dividend in 1851, was seven per cent on the capital. The increase in the amount of interest paid, was caused no doubt, by the higher rates paid on the floating debt.

	WATERTOWN AND ROME RAILROAD.	
Capital stock as by charter.....	\$1,500,000 00	
Amount of stock subscribed.....	890,100 00	
Amount paid in, as by last report.....	467,636 37	
Total amount now paid of capital stock.....	659,715 78	
Funded debt, as by last report.....	200,000 00	
Total amount now, of funded debt.....	442,000 00	
Amount now, of floating debt.....	53,385 26	
Total amount now, of funded and floating debt.....	495,385 26	
Average rate per annum of interest on funded debt, 7 per cent.		
1850.	1851.	
Cost of road and equipment.....	\$603,457 52	\$1,133,397 36
Length of road 97 miles —length of road laid, 72 miles.		
Number of passengers carried.....	2,601	56,907
Number of tons freight carried.....	680	34,307
Expenses of maintaining road.....	\$430 17	\$13,960 12
Expenses of repairs of machinery.....	none.	1,828 34
Expenses of operating the road.....	274 44	20,773 41
<i>Earnings and Cash Receipts and Payments.</i>		
Earnings fm. passengers	\$1,043 23	\$37,870 97
" from freight.....	1,089 12	48,132 66
" other sources.....	none.	7,865 01
Receipts fm. passengers	1,043 23	37,369 59
" from freight.....	1,089 12	39,965 61
" other sources.....	none.	5,216 82
<i>Payments other than for Construction.</i>		
For transportation expenses.....	\$262 89	\$35,561 87
For interest.....	none.	35,908 29
This road was only partially constructed last year. The average length of the road operated this year was forty-one miles, the trains having run to Watertown but twenty one days in this year.		

#### New Orleans.

The people of New Orleans have sent a delegation to Nashville, Tennessee, headed by James Robb, Esq., an eminent banker of that city, for the purpose of enlisting the co-operation of the people of Tennessee in the proposed railroad from New Orleans to Nashville.

"This mission," says the Nashville Banner, "has been made the subject of a special message from his Excellency, Governor Campbell, to the Legislature, which was promptly considered by that body, and an invitation extended to the members of the delegation to make an address explaining its object. Mr. James Robb, the chairman, on behalf of the delegation, responded to this invitation; and, on Tuesday evening, delivered in the Hall of Representatives, an address that was characterized by good taste and very enlarged views on the subject of internal improvements, agriculture, and manufactures, which we are glad to perceive awakening a wide-spread spirit of interest and enthusiasm in all the States of the southwest."

New Orleans is certainly waking up; but whether she will accomplish anything after waking up remains to be seen.

#### Lafayette, Oxford and Middleport Railroad.

A meeting of the citizens of the counties of Benton and Tippecanoe, Ind., and of Iroquois county, Illinois, was held at Oxford, Benton county, on the 20th of November, to consider the propriety of constructing a railroad from Lafayette, Ind., by the way of Oxford to Middleport, at which point, or near which, it will intersect the eastern branch of the Illinois Central railroad.

Resolutions were adopted and a committee appointed to prepare petitions asking a grant of land from Congress to aid in the construction of the road.

A committee was also appointed to confer with the Central railroad company of this State, with reference to a connection with their road.

#### Census of 1850.

Continued from Page 788.

Taking the 31 States together, their area is 1,485,870 square miles, and the average number of their inhabitants is 15.48 to the square mile. The total area of the United States is 3,220,000 square miles, and the average density of population is 2,719 to the square mile.

The areas assigned to those States and Territories in which public lands are situated, are doubtless correct, being taken from the records of the land office; but as to those attributed to the older States, the same means of verifying their accuracy, or the want of it, do not exist. But care has been taken to consult the best local authorities for ascertaining the extent of surface in those States, and as the figures adopted are found to agree with, or differ but slightly from those assumed to be correct at the general land office, it is probable that they do not vary essentially from the exact truth.

The area of some of the States, as Maryland and Virginia, are stated considerably below the commonly assumed extent of their territory, which may be accounted for on the supposition that the portions of the surface within their exterior limits covered by large bodies of water, have been subtracted from the aggregate amount.

The statistics of mortality, for the census year, represent the number of deaths occurring within the year at 320,194, the ratio being as 1 to 72.6 of the living population, or as 10 to each 726 of the population. The rate of mortality in this statement seems so much less than that of any portion of Europe, that it must at present be received with some degree of allowance.

Should a more critical examination, which time will enable us to exercise, prove the returns of the number of deaths too small, such a result will not affect their value for the purposes of comparison of one portion of the country with another, or cause with effect. The tables will possess an interest second to none others in the world, and the many valuable truths which they will suggest, will be found of great practical advantage.

#### MANUFACTURES.

The period which has elapsed since the receipt of returns has been so short as to enable the office to make but a general report of the facts relating to a few of the most important manufactures.

If, in some instances, the amounts of capital invested in any branch of manufacture should seem too small, it must be borne in mind that where the product is of several kinds, the capital invested not being devisable, is connected with the product of the greatest consequence. This, to some extent, reduces the capital invested in the manufacture of bar iron in such establishments where some other article of wrought iron predominates—sheet iron for example.

The aggregate however, of the capital invested in the various branches of wrought iron will, it is confidently believed, be found correct.

The entire capital invested in the various manufactures in the United States, on the 1st of June, 1850, not to include any establishment producing less than the annual value of \$500, amounted to in round numbers..... \$530,000,000

Value of raw material..... 550,000,000

Amount paid for labor..... 210,000,000

Value of manufactured articles..... 1,020,300,000

Number of persons employed..... 1,050,000

The capital invested in the manufacture of cotton goods amounted to..... \$74,501,031

Value of raw material..... 84,835,056

Amount paid for labor..... 16,296,304

Value of manufactured articles..... 61,869,184

Hands employed..... 92,286

The capital invested in the manufacture of woolen goods amounted to..... \$28,118,650

Value of raw material..... 25,755,988

Amount paid for labor..... 8,399,280

Value of products..... 43,207,555

Hands employed..... 30,252

The capital invested in the manufacture of pig iron amounted to..... \$17,346,425

Value of raw material..... 7,005,287

Amount paid for labor..... 5,066,628

Value of products..... 12,748,777

Hands employed..... 29,448

In making these estimates the assistant marshal

did not include any return of works which had not produced metal within the year, or those which had not commenced operations. The same is applicable to all manufactures enumerated:

The capital invested in the manufacture of castings amounted to \$17,416,361  
Value of raw material 10,346,355  
Amount paid for labor 7,078,355  
Value of product 25,108,555  
Hands employed 23,689

The capital invested in the manufacture of wrought iron amounted to \$13,995,220  
Value of raw material 9,518,109  
Amount paid for labor 4,196,628  
Value of product 16,387,074  
Hands employed 13,057

The statistics of the newspaper press form an interesting feature in the return of the 7th census.— It appears that the whole number of newspapers and periodicals in the United States, on the 1st of June, 1850, amounted to 2,800. Of these, 2,494 were fully returned, 234 had all the facts except circulation given, and 72 are estimated for California, the territories, and those that may have been omitted by the assistant marshals.

From calculations made on the statistics returned and estimated circulations where they have been omitted, it appears that the aggregate circulation of those 2,800 papers and periodicals is about 5,000,000, and that the entire number of copies printed annually in the United States, amounts to 422,600,000. The following table will show the number of daily, weekly, monthly, and other issues, with the average circulation of each class:

No.	Circulation.	No. of copies printed annually.
Dailies.....	350	750,000 235,000,000
Tri-weeklies....	150	75,000 11,700,000
Semi-weeklies..	125	80,000 8,320,000
Weeklies.....	2,000	2,875,000 149,500,000
Semi monthlies.	50	300,000 7,300,000
Monthlies.....	100	900,000 10,800,000
Quarterlies ....	25	20,000 80,000
	2,800	5,000,000 422,700,000

Number of papers issued in the New England States, 424; in the Middle States, 876; in the Southern States, 716; and in the Western States, 74.

The average circulation of papers in the United States, 1,785.

There is one publication for every 7,161 free inhabitants in the United States and territories.

#### Railroad between Gosport and Indianapolis.

The New Albany and Lake Michigan railroad company completed last week the survey of their branch road, leading from Gosport to this place.— The route is one of the most favorable in the State, both as regards cheapness of construction and passing through a country second to no other portion of the State in the amount and value of its products.

The distance from Gosport to the city limits is about 41 miles. It passes through Mooresville, distant 15 miles from Indianapolis. The road has but few curves of large radius, and from Mooresville here, it is a straight line. No grades will be required exceeding 30 feet to the mile, and for three-fourths of the entire, the grades will not exceed 12 feet to the mile.

The stock necessary to grade and bridge the road from Gosport to Mooresville, is now made up, and this part of the road will be located and let before spring.

The interests of our city demand that this road should not stop, even for a time, at Mooresville.— The great fertility of this section of our country, yielding annually, an immense surplus, will repay us for the small outlay of capital necessary to bring the road here. As a city our policy is fixed, and that policy is to *centralize* here, the trade of every portion of the surrounding country. The trade of this fertile section would well repay a struggle; as it is, we can obtain it by a single effort alone.

We hope, therefore, that our citizens will, at once, co-operate with the farmers between this city and Mooresville, and make up the necessary stock.— *Indiana State Journal.*

#### Harlem Railroad.

The following is a synopsis of the late annual report of the Harlem railroad. The total service performed by the company during the year was 318,602 miles, of which 326,258 miles were by steam, and 492,344 by horses.

This service was interrupted during the months of October and November last, by the relaying of the city track, which has not only increased the expense of operating during those months, but caused a large reduction in the receipts of the city line, while relaying.

The revenue for the above service has been as follows:—

Passenger fares, long line.....	\$235,760 33
Passenger fares, city line.....	96,060 18
Freight.....	\$147,510 47
Mails and expenses.....	4,482 06
Miscellaneous.....	2,001 09
	153,993 64
	475,814 15
Passenger fares from New Haven road.....	50,831 59
Freight from New Haven road.....	9,296 05
Haulage of cars do.....	51,675 00
Miscellaneous and Mail do.....	3,325 35
	64,296 40

Total revenue for the year..... \$590,942 14

The current charges of all kinds for this service have been..... \$313,781 87

Net earnings for the year ending 30th Sept., 1851..... 277,160 27

On the 30th Sept., 1850, the amount to the credit of profit and loss account was..... 49,663 02

Net earnings for the year as above stated..... 277,160 27

326,823 29

From this sum has been paid—

For taxes and assessments, insurance, Law expenses, etc..... 10,623 56

Balance..... \$316,199 73

From this balance has been paid:

Dividends No. 5 and 6, preferred stock..... 119,992 00

Dividends No. 3 and 4, old do..... 95,550 00

Interest on bonds, debts, etc..... 52,745 68

268,287 68

Balance..... \$47,912 05

The directors have charged on this balance a further sum for locomotives, in full of depreciation..... 6,480 18

Cars, in full of depreciation..... 3,534 51

Relaying city track, portion chargeable this year..... 6,526 53

Commissions, charges, etc..... 7,641 24

24,182 46

Leaving a surplus on the 30th Sept., 1851, for future operations, of..... \$23,729 59

The expenditures on capital accounts during the year for works under order or contract, and for the purchase of such additions to the equipment as were actually necessary to accommodate the increasing business, have been \$106,316 41.

To meet these expenditures and the previous floating debt, the directors, in January, last authorized the issue of 250,000 dollars in bonds of 1,000 dollars each, for 10 years, at 7 per cent.

The following is a condensed statement from capital accounts ledger, as balanced on the 30th September, 1851:

Capital stock, old..... 2,388,750 00  
" " preferred 1,500,000 00

\$3,888,750 00

Dover extension, 6 per cent bonds..... 149,201 48

Do. 7 do. do..... 220,000 00

369,201 48

Funded bonds, 7 per cent, payable 1861..... 250,000 00

Funded bonds, 7 per cent, payable 1872..... 250,000 00

Floating debt account..... 64,572 98

\$4,822,524 46

Railroad and depots..... 4,166,230 22

Equipment..... 309,310 00

Real estate,  
(unappropriated)..... 203,346 24

Less Mortgages..... 106,362 00

969 84 24

Albany extension cert's. 250,000 00

\$4,822,524 46

The roadway and superstructure, with small exceptions, are in good condition and repair, in every respect, and the bridges, especially the large and important structures on the Island of New York, are in excellent order, and have been pronounced of greater strength than when first erected, by the most judicious engineers of this city.

#### New Orleans, or Mobile and Ohio Railroad.

A large meeting has been lately held at Paducah, Kentucky, for the purpose of proposing that point on the Ohio, as the terminus of the Mobile or New Orleans roads. A delegation was appointed to the New Orleans convention in January.

Resolved, That the corporations of the town of Paducah should subscribe the sum of two hundred thousand dollars, and that the county of McCracken shou'd subscribe one hundred thousand dollars of stock in the Mobile and Ohio railroad company; provided Paducah is made the terminus of said road; and pay for the said stock in bonds, redeemable at 30 years, bearing 6 per cent interest per annum; and deliver said bonds to the President and Directors of the said railroad company, to be expended in constructing that part of the road in this state.

Resolved, that in the event of the said Mobile and Ohio railroad company making the terminus of said road at any other place than Paducah, the said stock be subscribed to either the railroad from New Orleans to the Ohio river, or to the railroad from Nashville, Tennessee; provided the road in which said stock shall be subscribed shall make its terminus at Paducah, the said bonds, in either event, should be expended in the construction of that part of the road leading out from Paducah.

Resolved, That in view of the many natural advantages as a commercial and manufacturing point, presented by Paducah, on account of its position at the head of low water navigation, its elevation above high water, and its accessibility by the easiest and most practicable grade, Paducah offers inducements for the terminus of either or all the contemplated routes, unsurpassed by any point fifty miles above or below the mouth of the Ohio river.

#### Iron and Coal in Minnesota.

A gentleman well acquainted with mining and geology, from Dubuque, Iowa, went, some time ago, on a prospecting tour from that place to Blue Earth river, one of the tributaries of the Minnesota river. He went on behalf of a mining company to explore for copper. He lately returned, and a few days since went below. He says that he found no copper, but strong indications of lead at many points on the route. On the waters of the Blue Earth he found iron and coal of excellent quality, in great abundance.

We have long been convinced that coal suitable for fuel exists in large quantities on the tributaries of the Minnesota river. There is no longer a doubt of the fact. Fortunately it is up stream and can be boated to this place at a very small expense.— *Minnesota Dem.*

**Ohio.**

*Exhibit of the Columbus, Piqua and Indiana Railroad.*—The Columbus, Piqua and Indiana railroad company, was incorporated by the Legislature of Ohio, February 23, 1849, with a capital of \$2,000,000; organised in February, 1850, and commenced active operations in June following.

The charter authorises the company to construct their road from Columbus to the west line of the State of Ohio, 103 miles, making Urbana in Champaign county, and Piqua in Miami county, points on the line. It also confers authority to make appropriations of lands necessary for roadway, depots, machine shop, water stations, side tracks, etc.

**COST OF LINE (FROM COLUMBUS TO GREENVILLE.)**

Mr. Conover, the chief engineer, upon an accurate survey and location of the line, (93 miles,) under his immediate control, estimates the total cost of making the road, ready for cars and machinery, \$977,897, being \$10,515 02 per mile. The company have made actual contracts for the roadway and depot grounds required along the line, for the most part, which have been chiefly released to the company, or compensated for by stock of the road, at par.

The directors propose laying the track with T rail, of 56 lbs. to the yard, of an approved pattern. By the adoption of which, they feel satisfied that all the advantages of durability, security and speed, may be obtained, that a heavier rail would afford, and a large saving be had in its purchase.

**CHIEF ENGINEER'S ESTIMATE OF COST BY DIVISIONS.****Cost of Eastern division, (between**

Columbus and Urbana) grubbing, grading, masonry and bridging, at \$2,883 22 per mile, for 46 miles, ..... \$132,628  
T rail, 56 lbs. per yd., at \$6,265 64 per mile ..... 288,219

Cost of Eastern division ..... 420,847

Middle division, from Urbana to Covington, same work per mile, \$4,827 33, for 32 miles, is ..... 154,475  
T rail laid ..... 200,500

Cost of Middle division ..... 354,975

Western division, from Covington to State line. This company, constructing only 15 miles, between Covington and Greenville, cost per mile \$2,277 21, for 15 miles ..... 34,158  
T rail laid ..... 93,986

— 128,144

Add two miles side track ..... 12,531  
Ballasting 30 miles after track laid ..... 23,400  
Engineering and incidental expenses, with instruments ..... 22,000  
Rights of way, mostly paid in stock ..... 16,000  
Depot buildings, station houses and equipments, for first year's business, to run the road from Columbus to Winchester ..... 166,000

Total cost ..... \$1,143,897

It will be seen by the above estimates, that the total cost, as here put down, in addition to the cost of making the road ready for the cars, includes depot buildings, station houses and equipments, for the 93 miles of road, and the equipments for 20 miles, which is being made by the Greenville and Winchester companies, to be stocked and used by this company. The estimates of the engineer here made, are based upon the contracts of the road now let and in progress, and therefore may be relied upon as correct.

**WAYS AND MEANS.**

To defray the above estimate of expenses, the company have secured public and private subscriptions, including stock agreed to be taken by contractors, in payment for work, amounting to the sum of ..... \$514,900

Instalments on stock paid in, and bonds cashed, amount to ..... \$322,500

Sums paid to contractors ..... 125,000

Deducting the above sum of \$514,900 from the estimated cost of putting the road in running order, amounting to ..... 1,143,897

Leaves to be raised by loans and additional subscriptions ..... 628,997

Which will be materially lessened by subscriptions now being made to the capital stock of said company.

To provide for the rail and machinery necessary for the commencement of business, it is proposed to issue the bonds of the company, to an amount not exceeding \$600,000.

**RAILROAD CONNECTIONS.**

The city of Columbus is a point where the majority of the roads in the State have their terminus, or stand in an intimate relation. Here will congregate a large portion of the travel passing between the eastern cities and the region of the great west, to take the choice of lines leading from this common centre. Through this point, lead the shortest and most direct routes, communicating between the most important places of the western and those of the eastern States.

The cities of Cleveland, Dunkirk, Pittsburg, Wheeling, Baltimore, Philadelphia, New York and Boston, are reached by lines constructed and in progression, on the shortest practicable routes from this point.

The Columbus, Piqua and Indiana railroad, commences at Columbus, and is continued westward to the town of Urbana, the county seat of Champaign county, 46 miles from Columbus, where it intersects the Mad River and Lake Erie road; which, with the Little Miami railroad, gives a direct communication between the Ohio river and Lake Erie, at Sandusky.

At the city of Piqua, Miami county, 70 miles west of Columbus, this road intersects the Miami Extension canal, leading from Cincinnati to Toledo, on Lake Erie. Here, also, is met the Cincinnati, Hamilton, Eaton and Piqua railroad, now under progress of construction from Hamilton to this point. The Dayton and Michigan railroad, the proposed extension of the Cincinnati and Dayton railroad, will pass through this point.

At Greenville, the county seat of Darke county, it meets the Greenville and Miami, and Greenville and Winchester roads, which two last roads carry the line of the Columbus, Piqua and Indiana road to Winchester, Indiana, the county seat of Randolph county, and constitute a part of this line.

By an arrangement made with the directors of the Greenville and Miami, and Greenville and Winchester roads, all necessary control is had of these lines and appurtenances, and the same made subject to the rules and regulations of the Columbus, Piqua and Indiana railroad company.

The Indianapolis road, taking up this line at Winchester, carries it westward to the capital of Indiana, and from thence is continued through Terre Haute and Vandalia, to the city of St. Louis. The Madison and Indianapolis, and Jeffersonville railroads, the Wabash, and Ohio, and Erie canal, intersecting the western prolongation from the south, and railways from the northwest, form highly important tributary lines. Thus is presented a central, as well as for the most part a terminal line, embraced between the Ohio and Mississippi rivers, intercepting and concentrating upon it the traffic of the numerous thoroughfares which range this large extent of territory, from the north and the south.

**SUMMARY OF ANNUAL TRAFFIC AND INCOME.**

62,600 through passengers, at \$3 40 for 113 miles ..... \$212,840

31,000 way passengers, at \$1 20 for 30 miles ..... 37,200

— 250,040

Mails and expresses per annum ..... 15,000

Total from passengers and mails ..... \$265,040

**FREE TRADES.**

108,800 tons, at an average rate of \$3 50 (export) ..... \$380,800

22,000 tons, at an average rate of \$2 50 (import) ..... 55,000

Total exports and imports ..... 435,800

Gross income ..... \$700,840

Deduct annual expenses of running the entire road ..... 395,462

Net income, as based upon said exhibit and calculations ..... \$305,378

The foregoing summary of annual traffic and income has been prepared from sources of anticipated revenue, and in the same manner as the exhibits of other roads now in operation [showing that their income had not been estimated too high,] and if this road had cost the same to put it in running order, per mile, as most of the western roads now in operation and progress, the gross income resulting from the foregoing estimate would not pay the stockholders a greater per cent than those first class roads in operation, and claiming for this road the same amount of business as any other road of 100 miles' length, a position which we feel sure will not be controverted, and taking the actual cost of its construction based upon the contracts of the whole work, and it will be seen that this road will pay in dividends on the stock about double what these others pay with the same business.

**FREIGHT TRAFFIC.**

The amount of through freights, hitherto passing between the marts of the Eastern Atlantic seaboard, and the commercial cities of the west, by means of canal, or steamboats, which will be transported by railroad, will constitute a large proportion. The rapidity, and certainty of transport by railroad, will secure a majority of the ordinary boat tonnage, even where the routes and points are the same; and freights destined for places inaccessible by water, will, in most instances, be thrown upon that through-fare which is unmixed in its connexions. Together with the heavy through tonnage of grains and minerals, tending to the cities of the east, an important item of revenue will be gained from the transport of live stock.

The route of the "Columbus, Piqua and Indiana, and Central Ohio" railroads is that of the drovers of Indiana, Illinois and the states farther west, and it is estimated that 50,000 head of cattle, annually pass through Greenville, and Piqua alone, (points on the line of Columbus, Piqua and Indiana railroad) from these states; and experience has shown that railway communication is the most expeditious, and cheapest mode of transporting live stock, causing less decline of value in transit; and western drovers have already, when practicable, adopted it. The location and direction of this road will secure to it a full share of this kind of transportation.

Of the extent of transport of hogs over this line, some idea can be had from the statistics of numbers raised throughout the west.\* The conveyance of pork, and other varieties of perishable commodities by the New Orleans route will, to a great extent, cease in consequence of the vicissitudes of climate and navigation attending it.

The population, tributary to the Columbus, Piqua and Indiana railroad, is 188,000.

The following staple products are raised, consumed and exported from this district:

**Freights Exported.****Products Consum'd**

Bushels wheat, corn, oats, rye, etc., ..... 14,885,000 7,885,000

Number cattle, hogs, sheep, horses ..... 648,488 568,488

Barrels flour, beef, pork, butter, lard, oil, whiskey ..... 70,000 20,000

Pounds of wool ..... 900,000 300,000

Exported tons

Bushels wheat, corn, oats, rye, etc ..... 7,000,000 50,000

Number cattle, hogs, sheep, horses ..... 80,000 8,000

Barrels flour, beef, pork, butter, lard, oil, whiskey ..... 50,000 8,000

Pounds of wool ..... 600,000 300

Empty barrels, staves, heading and hoop poles ..... 16,500

Lumber, stone, lime ..... 18,000

Articles not enumerated ..... 4,200

Total exports ..... 115,000

\* It is estimated that in the states of Ohio, Kentucky and Indiana, 1,000,000 of hogs were raised in 1850; and in Mississippi, Illinois, and Missouri, 581,000—total 1,581,000 head. In 1849, 195,665 hogs were brought into Baltimore from the west alone, over the Baltimore and Ohio railroad.

## Freights Imported to this District.

	Tons
Box and bale goods, cotton merchandize.	22000
Machinery, furniture, groceries.	22000
Salt, coal, iron, shingles, marble.	22000

The above items of freight, it is seen, have direct reference to the district of thirteen counties, for the most part immediately tributary, and dependent upon this road—and in quantity are below, it is believed, what will become the actual traffic.

No estimate is made of the probable amount of through transportation, which will be at once secured to this road, upon the completion of the Indiana and Illinois lines of railway; placing the city of St. Louis, and contiguous country, in connection with the Eastern Atlantic cities, by this east and west route. Any computation as to the magnitude and extent of that traffic, would, at best, be unreliable.

## PASSENGER TRAFFIC.

This item of business, from the route and connections of the Columbus, Piqua and Indiana railroad, must be large. Considering this road as a constituent portion of a main trunk line, extending from the cities of the Atlantic seaboard to the Mississippi river, on the shortest and most direct route; traversing a tier of counties and towns unsurpassed in point of importance, population and wealth, by any in the State, and on the route of the usual travel, (that of the great national road,) its claims, as a popular thoroughfare, will not be disputed. It has been noticed, that this road connects with four leading thoroughfares, ranging the State north and south; and that this link is characteristic of nearly every other, comprising its eastern and western prolongations. This fact, attending its position, as an intersecting and terminal line, clearly indicates a large and perpetual support from foreign sources.

Of the 73,000 passengers, reported to travel annually upon the Ohio river, between Cincinnati and Wheeling, it is estimated that two-thirds of that number will be diverted upon the Central Ohio railroad, (vide Col. Sullivan's Exhibit for

1851,) making ..... 48,666  
Add usual travel by stage and private  
conveyance ..... 22,347

Aggregate of through travel ..... 71,013

This calculation would give the Central road over 225 passengers per day, producing the annual sum of 298,254 60 dollars.

If we set down one-third of this number as necessarily thrown upon the line of the Columbus, Piqua and Indiana railroad, and the above facts apply equally to the whole Ohio line, we have in each direction 50 passengers per day, equal to 100. Passengers from the Indiana and other connecting lines, 100.

This gives 200 passengers per day, which is 113 miles, a 3 dollars 40c., for 313 working days, makes 212,840 dollars.

As to estimating the amount of way travel, no more satisfactory result can be obtained, than by the observations of toll gates, and other points along the principal turnpikes which run parallel or adjacent to the route of the railroad. By reference to this, to ordinary stage travel, and the proportion of travel to the amount of population, we find an average number of 100 travellers by private conveyance, moving in each direction, for distances of 20 and 40 miles. This would give 200 travellers in one direction. One-half of this number, we estimate, would become railroad passengers, which would give as follows:

For one year, of 313 days ..... 31,300

Taking 40 miles as average distance travelled per day, a 4 cts. per mile per passenger, we have per annum \$37,200.

This cannot but be regarded as a low estimate for the way travel, for a district of 188,000 souls. On the eastern railroads, the average proportion of way passengers to the through, is as 5 to 1. "Baltimore and Ohio," as 6 to 1. "Central Michigan," as 3 to 1. While the local passenger business of the Mad River road, generally equals its freight earnings, which is large, with a less tributary population. In regard to the travel upon the route, it is but natural to suppose, that upon the completion of the several links which constitute this great

chain of railway, and its accessories, and the facilities thereby afforded of an intercommunication between the east and the west, at once constant, rapid and cheap; that objects of business, information and amusement, will increase this variety of traffic for these roads, five-fold above our present estimate.

The company design making sale of \$600,000 of their first mortgage bonds, with a view to the purchase of their iron and other equipments, having already provided with other means for the cost of the construction of the roadway.

These bonds are secured by property valued over a million of dollars, and with a present prospect of the same, being put into active compensating operation. The prominent position of the road as a main and leading thoroughfare, with its numerous and valuable connections, together with the rich and populous tributary country through which it passes, will always insure it a large traffic; and the exceedingly low cost of its construction must make it a source of highly remunerative profit to its stockholders.

The entire road is hastening to completion under a heavy force; and by the contracts the grading is to be completed by the 1st of Sept., 1852.

The line from Indianapolis to Winchester will be completed about the time that the Ohio lines are finished; so that a direct communication can be had between the capital of Ohio and Indiana at an early day. We are further informed that the company have succeeded in completing a purchase of 10 locomotives on the most favorable terms, in which their bonds were taken at par for the whole; also, that the company now are negotiating for the purchase of 10,000 tons of rails, which they expect to consummate in a few days.

## Application of Electro-Magnetism to Rail-way Transit.

A gentleman by the name of Nickles has invented an apparatus for the purpose of increasing the adhesion of the wheels of a locomotive to the rails by the application of electro-magnetism. His plan is to convert the wheel of the locomotive into a magnet, and make it adhere to the iron rail by an adhesion similar to that by which a slip of steel adheres to a common horse-shoe magnet. The manner in which Mr. Nickles applies his apparatus is thus stated:—

"He places a galvanic battery under the body of the engine. A wire coming from the poles of this battery is then coiled horizontally round the lower part of the wheel close to the rail, but in such a manner that the wheel turns round freely within it, fresh portions of its circumference coming continually into relation with the coil. The part of the wheel in immediate contact with the rail is thus made magnetic, and therefore has a strong adhesion for the surface along which it moves—and the amount of the adhesion may be increased or diminished at any time, by merely augmenting or reducing the intensity of the galvanic current that circulates through the surrounding coil. By means of a handle the electricity may be turned on or off, and an effectual brake be thus brought into activity that can make the iron rail smooth or adhesive, according to the requirements of the interest, and this without in any way interfering with the free rotation of the wheel as the friction brakes of necessity do. Increased adhesion is effected by augmented pressure, but the pressure results from the attraction that is altogether independent of weight. The lower portion of the wheel for the time being is in exactly the same condition as a bar of soft iron placed within a coil of wire circulating electricity. But as it rises up out of the coil during the rotation of the wheel it grows less magnetic, the descending portions of the opposite side of the circumference acquiring increased magnetic power in the like degree."

## Railroad in Texas.

The great railroad convention of the State of Texas, met on the 24th ult., at Austin; Colonel J. W. Dancy, of Fayette county, was appointed President, and Lucius C. Cloplin, Esq., of Smith co., Secretary. The members of the two houses of the Legislature, and citizens present from various parts of the State, not members of the convention, were invited to take seats and participate in its deliberations.

The Gazette says its proceedings have been characterized by much spirit, and much valuable information, statistical and otherwise, has been elicited in the discussions.

Speeches were made by the President, Colonel Paine, of New Orleans, I. A. Paschal, E. Jones Rivers, Gen. James Davis, Gen. Memucan Hunt, O. C. Hartley, and others.

A committee was appointed to report resolutions for the action of the convention. Judge Paschal, from the above committee, and in behalf of the Chairman, read a lengthy and very able report, advocating the policy of the State's embarking in an extensive scale of internal improvements, and affording liberal aid to private corporations in the construction of railroads, plank roads, etc. The gist of the report may be gathered from the following resolutions, with which it closed.

Resolved, That the Legislature of the State of Texas be respectfully requested to set apart \$3,000,000 as an internal improvement fund, to be lent by the State in aid of such enterprises of internal improvement as may be undertaken by any chartered company in this State; that is, in aid of canals, navigable streams, railroads and plank roads, in this manner proposed in this report.

Resolved, That the Legislature be also requested to donate as a bonus 5000 acres of land for each and every mile of railroad fully executed in this State, and to deliver the certificates for the same whenever any company shall have completed five miles of said railroads.

Resolved, That the Legislature be also requested to charter any company for the construction of a railroad passing nearly through the centre of our State to El Paso, reserving the privilege of tapping said road at any point; and further, that a liberal donation in land, be made in aid of the construction of the same.

## Great Discovery of Lead Ore.

The Galena Advertiser gives an account of a discovery of lead ore, which promises to surpass anything of the kind on record. It was made about two miles northeast of the Linsipheur Mound, is two miles distant from any other diggings, on a farm in the prairie, and was made by a boy finding a mineral in a creek. On examining the creek it was found to be almost a solid mass of lead ore for some ten or twelve feet in width. Some three or four holes have been sunk about 4 feet in the clay, on each side of the creek, and specimens of large block minerals taken out, weighing from fifty to one hundred pounds.

This ore lies between the clay and rock, forming a horizontal floor, and has been proven on one side of the rock for fifteen feet in width.

## New Railroads in Europe.

Mr. Mangne, the French Minister of public works, has recently made a tour through Europe, for the purpose of inspecting railroads, and gathering information. He learns that the German princes have agreed upon a double line, terminating at Trieste, one starting from Hamburg and the other from Treves; and thus opening a path for England and Belgium to the Adriatic. Another line is to extend from Konigsberg to the Lake of Constance and Italy. M. Mangne was much impressed with the immensity of the works at Sommeting, in forming a pathway through the Julian Alps. There are thirteen tunnels and twenty-five viaducts; 13,000 laborers and 200 horses are steadily employed. The route is to be completed in 1853. Several roads are planned or under way in Italy. It is hoped that the Holy Father will at length consent to the building of the connection between Ancona and Rome. At Turin, M. Mangne conferred with the king on the junction of Lyons and the Sardinian capital, via Savoy and Mount Cenia. An English company has already contracted for the construc-

tion of railways from Turin to Saze, and from Modena to Chambery. The tunnel through Mount Cenia will be nearly *seven* miles in length.

## American Railroad Journal.

Saturday, December 20, 1851.

### Hudson River Railroad.

We spoke in our last of the disappointment of public expectation in reference to the success and management of this road. We continue to hear constant complaints of the manner in which it is operated, and the want of suitable equipment for the transaction of business. It is seldom that the trains make the running time that they are advertised to make, and in many instances they are so far behind, as to cause a serious consequence to the traveller. Large amounts of freight have accumulated at various points, which the company have been unable to move. For this reason, dissatisfaction on the route is so great, as to turn a large amount of business upon the *Harlem*, which properly belongs to the Hudson River road. The dreadful accidents which have occurred on this line, in addition to the bad management in other respects, indicate the want of a competent person at the head of affairs.

The President of the road brought with him upon the Hudson River, an excellent reputation, from the admirable manner in which the Utica and Schenectady road was managed, while superintendent of that line. The latter continues to be a model road, and is celebrated for its excellent system of management. This Mr. Young has signally failed to introduce upon the Hudson River road.—There is a screw loose in the latter which the directors must correct. The \$11,000,000 which the road is estimated to cost, call loudly for the best management, if the stockholders expect any return upon their investments. If they were in a position to monopolize the business between two such important points as Albany and New York, they could better disregard public convenience with less risk of loss; but they must remember that they have the Hudson river on one side, and the *Harlem* on the other, competitors for the same business. The latter road is watching their movements with an eagle eye, and is preparing to profit by the slightest mistakes of the former. The *Harlem* is under the most efficient management, and with the two rivals, which we have named, the Hudson River railroad cannot afford to be ill-conducted, or to have any but the most competent men in its employ.

### The Nicaragua Route.

The Syracuse Star says that the contract for constructing the plank road between Lake Nicaragua and the head of navigation on the Pacific side, has been awarded to Elizur Clark, of that city, at \$11,000 per mile. The road will be twelve and a half miles in length, and is to be finished in 9 months. Mr. Clarke will erect a steam saw mill to furnish the plank, which will be cedar, and will carry on his workmen from Syracuse.

### Locomotives on Lake Erie.

Four locomotives have been lost from the decks of vessels on Lake Erie the past season. Two belonged to the Dayton and Western railroad, and were fully insured; and two, we believe, to the Mad River railroad.

### Ohio and Pennsylvania Railroad.

This road has been opened for travel to Palestine, in Ohio, 49 miles from Pittsburgh.

### Virginia.

*James River and Kanawha Canal.*—The Richmond papers give, in part, the proceedings of this company, with the report of President Mason. Of the latter the Dispatch of Thursday last says: "The financial exhibit is rather unfavorable. The gross receipts of the company amounted to \$251,560—the cost of repairs, interest on debt, and other charges against the company have exceeded this amount by the sum of \$48,628. The estimate for the next year is for a gross receipt of \$32,000, and a deficiency of 50,978. He advises that the State convert the debt due into stock, and that the Legislature be petitioned for an appropriation of \$300,000, to pay the interest that will accrue by the first of July. The cost of the work between Lynchburg and Buchanan has exceeded the appropriations by the sum of \$150,000.

Professor Tuomey, of the Alabama University, has reported in favor of the practicability of taking the canal across the Allegheny, giving as his opinion, that the supply of water is entirely sufficient.

The company still maintain an unshaken determination to carry the water line to the Ohio. As soon as we receive a copy of the proceedings of the meeting of the stock holders, we shall be happy to give a more full account of them.

### Columbus Pique and Indiana Railroad.

We give in another place a portion of the recent exhibit of this company, which presents in a strong light its claims to public confidence. No better idea can be given of the future success of the road, than to say, that it traverses one of the best portions of Ohio, a well settled and rich country, full of thriving towns and villages, being engaged in almost every branch of industry. Its line is parallel with the route of travel and business, and it will constitute a portion of a very important through line, extending through Ohio, Indiana and Illinois. Such a statement as this makes out a strong case in favor of any western project. In addition, we are able to say, that the affairs of the company have been exceedingly well managed, and are in a very prosperous condition. Contracts have been made for a large amount of machinery, and negotiations are on foot for the iron. It is expected that the road will be completed in one year from the 1st day of January next.

Troy, Dec. 16, 1851.

### EDITOR RAILROAD JOURNAL:

In your Journal of the 8th and 29th of November, mention is made of the iron bridge recently erected over the Appomattox river, on the line of the Richmond and Danville railroad Virginia.—Will you please inform me upon what pattern the bridge is constructed, and the length of span used?

Yours truly,

H. M. L.

The iron bridge recently built on the line of the Richmond and Danville railroad referred to above, is 200 feet long, in two spans. It was built by the New York Iron Bridge Company, and was tested to the entire satisfaction of the railroad company in Oct. last.

We are informed that other iron railroad bridges, built by the same company, after having been used over twelve months, were found to retain precisely their original shape, and were re-tested with the same results as when first completed.

This plan of iron bridge took the prize medal at the World's Fair in London, and was erroneously published in the list as "Rider's Iron Bridge." It

should have been Col. Stephen H. Long's Patent Iron Bridge, Col. Long being the inventor and patentee.

### New York.

*Buffalo and State-line Railroad.*—The Dunkirk Journal states that the locomotives and cars necessary for opening the Buffalo and State-line road, from Dunkirk to the State line, having arrived via the New York and Erie road, are being placed on the track.

The track is now in running order, except the short space between Centre street and the depot in the village of Dunkirk, and workmen are busily employed in laying the rails on this part.

### Connecticut.

*Canal Railroad.*—The New Haven Journal says that the Connecticut Legislature at its last session accepted the report of the commissioners laying out the Canal road to the State-line, through the "Peddler's Lot," notwithstanding the decision of Judge Ellsworth, that it would not and could not do so. It also passed a resolution requiring the road to be built to the State-line within about a year, or forfeiting the charter for that part which should not be constructed.

### Cannel Coal in Ohio and Pennsylvania.

The Pittsburgh Gazette States that cannel coal of the best quality and inexhaustible in quantity, is found upon the line of the Pennsylvania and Ohio railroad. It is found in the valley of the Little Beaver, about 50 miles from Pittsburgh, and is to be used by the above company for locomotive purposes. The same paper also states that the same kind of coal is found in great abundance in Armstrong county, on the contemplated line of the Allegheny River railroad.

### Railroad Subscription.

The counties of Mercer and Franklin have each voted \$200,000 to the stock of a railroad from Harrodsburg to Frankfort.

### Canada.

A railroad from Guelph on the Great Western of Canada to the town of Galt, a distance of 9 miles is in progress.

### Stock and Money Market.

Money has been more in demand the present than the previous week, and fancy stock, the prices of which indicate with great certainty the abundance or scarcity of money, have generally declined. There is no great demand for money for ordinary purposes, business generally being very slack. The present tightness is owing mainly to the heavy exportation of specie.

In the bond market a fair business is doing among the best securities. If a road is in a situation to meet the conditions of the foreign demand, there is but little difficulty in disposing of its bonds. Foreigners are unwilling to take the bonds of our unfinished works, for the same reason that an American would be unwilling to take the securities of France. We have in our favor *stability* in our institutions, which, unfortunately, cannot be affirmed of the country named. As a general rule, it may be stated, that cheaply-constructed lines, both south and west, are rapidly growing in favor, and public confidence, which is showing itself, not only in the purchase of their bonds for investment, but in the disposition on the part of capitalists to engage in the construction of roads, and to take their profits in stock.

The recent sale of the Cleveland and Ashtabula road is a good index of the market value of good

bonds. This road is not yet completed, but its line occupies a conspicuous position in the public eye as it must form the connecting link between eastern and western roads. The amount of bonds sold were \$200,000. The bids were for a much larger sum. The bonds were awarded as follows, viz: 50 to Harvey Seymour, at 87 $\frac{1}{2}$  a 85; 4 to Carpenter & Vermilye, at 87 $\frac{1}{2}$  a 86; 20 to Nathaniel Marsh, at 86 a 84 $\frac{1}{2}$ ; 12 to Chas. M. Oakley, at 86 a 84; 37 to J. W. at 85 $\frac{1}{2}$  a 84; 2 to Jas. Brown, at 85 a 84 $\frac{1}{2}$ ; 20 to Ira B. Carey, at 85; 25 to H. Pumelley, at 85 a 84 $\frac{1}{2}$ ; 10 to Merchants Bank Cleveland, at 85 a 84 $\frac{1}{2}$ ; 20 to Wm. H. Russell, at 85 a 84 $\frac{1}{2}$ .

**Ohio Canals.**—The following statement shows the receipts of the Ohio canals for two years, ending Nov. 15th:—

	1851.	1850.
Ohio canal	\$411,911 70	\$397,332 57
Miami and Erie	326,784 25	315,162 60
Muskingum Imp.	39,008 39	36,724 29
Hocking canal	11,013 08	8,078 67
Walhonding do.	2,561 86	2,555 09
Total	\$791,279 28	\$759,852 22
	759,852 22	

Increase..... \$31,425 06

The clearances of the leading articles of commerce from the port of Cincinnati for the same periods are as follows:—

	1850.	1851.
Coffee, lbs.	1,282,492	1,673,243
Candles, do.	140,742	214,807
Crockery, do.	256,101	312,874
Iron, lbs.	4,618,960	13,713,325
Castings, do.	1,190,224	1,069,542
Nails, do.	1,514,317	1,675,665
Molasses, do.	3,093,035	3,097,662
Sugar, do.	3,886,572	4,361,418
Tobacco leaf, do.	962,177	2,114,023
White lead, do.	296,567	281,717
Sundries, do.	4,179,364	5,867,202
Merchandise, do.	5,455,627	6,322,645

*Receipts of Michigan Central Railroad.*

	November.	1850.	1851.
Freight		\$63,451 26	52,017 36
Passengers		38,652 72	46,116 73
Miscellaneous		3,015 44	2,189 70
		\$105,119 43	\$100,323 73

Receipts for the year 1851	.....	1,110,043 89
" 1850	.....	857,156 97

Increase..... \$252,886 92

It is supposed the dividend of the year will be 14 per cent.

**Ogdensburg Railroad.**—The earnings of the Ogdensburg railroad in the month of November were as follows:

Freights	.....	\$30,390 05
Passengers	.....	7,583 51
Rents	.....	218 84

Total	.....	\$38,192 40
Earnings in same month last year	.....	30,464 19

Increase..... \$7,728 21

The Troy and Rutland railroad company have agreed to let the Rutland and Washington railroad company run their road for one year, for the use of which they are to pay \$9,000, and are to keep the road in good repair.

The Boston and Worcester railroad company have declared a dividend of 3 $\frac{1}{2}$  per cent, payable January 1. The Fitchburg and Worcester railroad of 3 dollars per share on the full paid preferred stock, payable on demand.

The directors of the Little Miami railroad company, out of the earnings of the six months ending 1st December, '51, have declared a dividend of five

per cent, with a surplus of nearly 40,000 dollars, making the entire surplus of the company about 100,000 dollars to that date.

The earnings of the Madison and Indianapolis railroad, for the week ending the 16th December, 1851, was ..... \$7,300 Corresponding week of 1850, was ..... 5,600

Increase..... 1,700

The Collector of the Philadelphia and Columbia railroad, at Columbia, in his annual report, states the amount of tolls received at that office, during the fiscal year ending Nov. 30, 1851, to be From railroad..... \$176,600 15 From passengers and passenger cars.. 96,003 46

Total..... 272,603 61

The Philadelphia Ledger, in allusion to a dividend next month by the Reading railroad, says:—

" We know nothing positively, and we probably know as much on that point as any one outside the board of managers. There are differences of opinion, and all is but matter of opinion. We yesterday saw a statement in figures from one intimately acquainted with the business of the company, and that statement set down a cash dividend of four per cent in January next, and a further cash dividend of six per cent within the coming year, besides a twelve per cent stock dividend from the company's sinking fund, making in all twenty-two per cent."

### Railway Share & Stock List;

CORRECTED WEEKLY FOR THE  
AMERICAN RAILROAD JOURNAL.

NEW YORK DECEMBER 20, 1851.

GOVERNMENT AND STATE SECURITIES.		
U. S. 5's, 1853	.....	101
U. S. 6's, 1856	.....	103 $\frac{1}{2}$
U. S. 6's, 1862	.....	110 $\frac{1}{2}$
U. S. 6's, 1862—coupon	.....	114 $\frac{1}{2}$
U. S. 6's, 1867	.....	116 $\frac{1}{2}$
U. S. 6's, 1868	.....	115
U. S. 6's, 1868—coupon	.....	122 $\frac{1}{2}$
Land Warrants	.....	140a145
Arkansas 6's	.....	52a53
Alabama 5's	.....	91a92
Indiana 5's	.....	85
Illinois 6's, 1870	.....	65a68
Kentucky 6's, 1871	.....	104a106
Massachusetts sterling 5's	.....	105a106
Massachusetts 5's, 1859	.....	100 $\frac{1}{2}$
Maine 6's, 1855	.....	103
Maryland 6's	.....	102 $\frac{1}{2}$
Michigan	.....	—
Mississippi	.....	—
New York 6's, 1855	.....	103 $\frac{1}{2}$
Ohio 6's, 1860	.....	109
Pennsylvania 5's	.....	91

### RAILROAD BONDS.

Atlantic and St. Lawrence, 6 per cent	.....	85
Baltimore and Ohio, 1867	.....	94 $\frac{1}{2}$
Boston and Providence 6's, 1855	.....	101
Boston and Worcester 6's, 1855, convertible	.....	107 $\frac{1}{2}$
Bost., Concord and Mont. 6's, 1860, mortgage	.....	87 $\frac{1}{2}$
Cheshire 6's, 1860	.....	91 $\frac{1}{2}$
Connecticut River 6's, convertible	.....	89
Erie 7's, 1859	.....	102
Erie 7's, 1868	.....	106
Erie income 7's	.....	94 $\frac{1}{2}$
Hudson River 7's, 1853	.....	101 $\frac{1}{2}$
Michigan Central, convertible, 8's, 1856	.....	104 $\frac{1}{2}$
New York and New Haven	.....	100
Norwich and Worcester, mortgage, 1860	.....	80a85
Old Colony, 1854	.....	97 $\frac{1}{2}$
Ogdensburg 7's, 1859	.....	93 $\frac{1}{2}$
Portsmouth and Concord	.....	80a85
Passumpsic 6's, 1859	.....	94 $\frac{1}{2}$
Rutland 7's, 1863	.....	90
Reading mortgage, 1860	.....	78
" " 1870	.....	70
Sullivan, mortgage 6's, 1855	.....	67
Vermont Central 6's, 1852	.....	90
" " 6's, 1856	.....	85
Vermont and Massachusetts 6's, 1855	.....	84

### RAILROAD STOCKS.

[CORRECTED FOR WEDNESDAY OF EACH WEEK.]

Dec. 10. Dec. 17.

Albany and Schenectady	.....	89 $\frac{1}{2}$	97
Atlantic and St. Lawrence	.....	60a65	—
Androscoggin and Kennebec	.....	30a35	—
Boston and Maine	.....	106 $\frac{1}{2}$	102 $\frac{1}{2}$
Boston and Lowell	.....	108	109
Boston and Worcester	.....	103 $\frac{1}{2}$	99 $\frac{1}{2}$
Boston and Providence	.....	90	90
Bost., Concord and Montreal	.....	35	35
Baltimore and Ohio	.....	67 $\frac{1}{2}$	61 $\frac{1}{2}$
Baltimore and Susquehanna	.....	34	—
Cheshire	.....	47	49 $\frac{1}{2}$
Cleveland and Columbus	.....	—	—
Columbus and Xenia	.....	—	—
Camden and Amboy	.....	—	—
Connecticut River	.....	60	—
Delaware and Hudson (canal)	.....	99	100
Eastern	.....	99 $\frac{1}{2}$	99 $\frac{1}{2}$
Erie	.....	86 $\frac{1}{2}$	85 $\frac{1}{2}$
Fall River	.....	97 $\frac{1}{2}$	95 $\frac{1}{2}$
Fitchburg	.....	111 $\frac{1}{2}$	110 $\frac{1}{2}$
Georgia	.....	—	—
Georgia Central	.....	—	—
Harlem	.....	68	67 $\frac{1}{2}$
Hartford and New Haven	.....	122	—
Housatonic (preferred)	.....	—	—
Hudson River	.....	70	70
Kennebec and Portland	.....	50a55	—
Little Miami	.....	—	—
Long Island	.....	15	15 $\frac{1}{2}$
Mad River	.....	—	—
Madison and Indianapolis	.....	90	93
Michigan Central	.....	105	109 $\frac{1}{2}$
Montgomery and West Point	.....	—	—
Michigan Southern	.....	—	102 $\frac{1}{2}$
Manchester and Lawrence	.....	82 $\frac{1}{2}$	82 $\frac{1}{2}$
Morris (canal)	.....	14	14 $\frac{1}{2}$
New York and New Haven	.....	108 $\frac{1}{2}$	110
New Jersey	.....	—	130
Northern	.....	64 $\frac{1}{2}$	64
Nashua and Lowell	.....	104 $\frac{1}{2}$	—
New Bedford and Taunton	.....	108	—
Norwich and Worcester	.....	53	53 $\frac{1}{2}$
Norfolk County	.....	15 $\frac{1}{2}$	15 $\frac{1}{2}$
Ogdensburg	.....	29	29
Old Colony	.....	66	64
Passumpsic	.....	70 $\frac{1}{2}$	58
Pennsylvania	.....	—	—
Pittsfield and North Adams	.....	95	—
Philadelphia, Wilm'gton & Balt.	.....	29 $\frac{1}{2}$	30
Petersburg	.....	—	—
Richmond and Fredericksburg	.....	—	—
Richmond and Petersburg	.....	—	—
Reading	.....	59 $\frac{1}{2}$	60 $\frac{1}{2}$
Rochester and Syracuse	.....	111 $\frac{1}{2}$	111
Rutland	.....	40	39
Stonington	.....	51 $\frac{1}{2}$	48 $\frac{1}{2}$
South Carolina	.....	—	—
Syracuse and Utica	.....	123 $\frac{1}{2}$	—
Sullivan	.....	15a20	—
Taunton Branch	.....	108	110
Troy and Greenbush	.....	90	—
Tonawanda	.....	—	—
Utica and Schenectady	.....	129	127 $\frac{1}{2}$
Vermont and Canada	.....	97	99 $\frac{1}{2}$
Vermont Central	.....	25 $\frac{1}{2}$	26 $\frac{1}{2}$
Vermont and Massachusetts	.....	26	27
Virginia Central	.....	—	—
Western	.....	104 $\frac{1}{2}$	104 $\frac{1}{2}$
Wilmington and Raleigh	.....	56	—
York and Cumberland (Pa.)	.....	19 $\frac{1}{2}$	—

### Ohio.

**Ohio Central Railroad.**—The President of this road, J. H. Sullivan, Esq., writes to the Wheeling Gazette that the surveys of the division between Zanesville and Wheeling are so far advanced, that the line will be in readiness for examination on the 15th of January next, and for letting on the 1st of February following. The distance between Zanesville and Wheeling is somewhat over 80 miles.—As there will be a large amount of heavy work upon this part of the line, contractors will do well to turn their attention in this direction. Advertisements of lettings will probably be published in a few days.

For the American Railroad Journal.  
**The Canada Railroad Connection with the Central Lines.**

The peninsula of Upper Canada now contains the largest and best tract of unoccupied land in the immediate vicinity of the State of New York. It is in the same parallel with the Genesee country, that has always been so celebrated as a wheat growing region. It is of similar character; has a mild climate and a most productive soil. Already the best wheat is raised about the head of Lake Ontario, very large quantities of which come to Rochester, and to Oswego. It has not been usual for the English to advance as rapidly as we do. Hence this country has not kept up with its great advantages. The relations between the two governments have not until lately proved an interchange of travel. Now a more liberal policy is adopted, and it will continue, until the lines between Canada and New York, so far as trade is concerned, will be merely nominal. This is clearly one of those steps in improvement that do not go backward. The productive character of the country referred to is immense, and its power will now soon be developed by the levelling, equalizing, and concentrating force of the railroad. The railroad called the Great Western, is now in process of construction. It is to extend from the Suspension Bridge at Niagara Falls to the Detroit river, opposite to the termination of the Michigan Central railroad. It will be, when completed, about 238 miles long, passing over and through the peninsula named above. Its construction is now secured by the favorable aid which it receives from the legislation of the Colonial and the British government, and from the wise and timely aid which will be afforded by the authorised subscription of the central line of railroad in our State to its stock. The country over which it passes is remarkably level, and therefore it will have great power, as affording an outlet for the productions of the region. It will be of the same gauge as the *central lines* in Massachusetts, New York, Michigan and Illinois. It will connect directly with them. It will form the longest line of uninterrupted railroad gauge in the world. At the eastward, it will connect with the new railroad to be opened next June, from Rochester to Niagara Falls. This road will be better appreciated when it is completed than it now is, for it is most favorably situated on account of grade, extending along the canal, and following its regular descent. The value of a country that admits a regular and navigable flow of water from Lake Erie to the Hudson must of course be very great, to railroad. It has, in the minds of far-seeing and sagacious men, been long settled, that the most thorough working line for a railroad, from Lake Erie to the Hudson river, is the one that most nearly follows the *water courses*. The Great Western, in Canada, will thus have this line direct to Rochester, and thence, by the improved line, eastward, will connect at Troy and Albany with the railroads south and east of those cities. The same gauge extends all over New England, to Maine. It will have the connection with the two (soon to be great) railroads on the east side of the Hudson river, to New York.

At the westward, it will cross the Detroit river, and have the most direct connection with the Michigan Central railroad. This is sometimes, and in some quarters, urged as an objection. Let us leave this to the power of invention, and to the results which sharpened competition will stimulate. The steam engine will easily project an almost floating bridge across the Detroit river, the moment

it is necessary. A float will be constructed long enough to take on a whole train of cars, and will with ease cross and re-cross that river. Continuous tracks up to the edge of the water on each side will readily receive the floating trains, and the traveller may not know that he has crossed the beautiful strait that connects these inland seas.

On the Michigan Central to Chicago, the gauge connects with one line of railroad to Galena, now rapidly progressing. It will connect at Chicago, also, with the Illinois Central, which is to be made to Cairo, at the mouth of the Ohio. From there a railroad is in progress through the States of Kentucky, Tennessee, Mississippi and Alabama, to Mobile. The city of Chicago is to be one of the great railroad points in our country. It has been celebrated as being at the head of 1500 miles of navigable inland water communication to New York. It has derived great advantages from its position, in respect to navigation, and in respect to its being the marketable point of an extensive rich country. In the future, it will derive great benefit from the railroads which will converge to it. They cannot fail to concentrate at that point a vast amount of trade and travel.

New York is thus far the great point of attraction on the seaboard, to which the largest part of this trade and travel tends. The direction that way has been thus far secured by water; now a new element of transit is adopted, and the railroad is looked to as one of the great means of conveyance. The New Yorker, standing at Chicago, and seeing the tide of business flow to that point, will enquire how it may best be directed to New York. He will reflect that Philadelphia and Baltimore are projecting their lines of railroad, over the mountains, to the shores of the lakes, and thence to the city of Chicago. He will see that the mountains intervene, and the gauges are broken, in these directions. He will follow the line of the two railroads (the Central and the Southern) in Michigan, and he will see that they may both connect with the Great Western through Canada, and by that route reach his city, on a line unbroken by mountains or by change of gauge. That it will be the *shortest*, by far the most *level*, and therefore the most efficient line of railroad to his city. It is well known that the line of Lake Shore railroad along Lake Erie, is of the *Ohio gauge*. West of Toledo it is different, being the same in all the western States, and the same as the New York Central, and in all New England.

It would be most strange, then, for a New Yorker not to see that the Great Western in Canada is a most important line of railroad for his city. There is no reasonable question on this subject, and it can be only those who have an interest in conflicting lines, that would fear any unfavorable result from the construction of the Great Western railroad.—But some have urged, that the trade will from Hamilton at the head of Lake Ontario flow to Ogdensburg, and thence by railroad through Vermont to Boston, and that thus New York would be in danger of losing a large trade. Those who urge this, either overlook, or do not understand facts.—These, are stubborn matters, and they have great influence upon the force of argument, as well as upon the course of trade.

Suppose the traveller, or property, once afloat upon Lake Ontario, will not the *shortest* and the *best* route be sought? That is not by way of Ogdensburg. Oswego is nearer to Boston, and of course to New York, by railroad, than is Ogdens-

burg to either. Look at the distances. From Oswego to Boston is 383 miles by railroad, over 250 of which is double track. From Ogdensburg, it is over 400 miles to Boston by railroad. Oswego is about 100 miles nearer to Hamilton than is Ogdensburg. These are facts. Why should any one going to Boston from Hamilton, go by way of Ogdensburg? Only to take the *longest, slowest and most interrupted route*. The trade then for Boston, from Hamilton, will most naturally come to Oswego, and pass over the New York central line, and the Massachusetts Western, (which is their central.) Certainly it will do so, if the shortest and quickest route commands the business. It is not necessary to contrast the railroads occupying the respective lines. It is only necessary to look at *distances and grades*. They are all on the same side.

There can be little danger of diverting trade and travel from New York to Boston, when the shortest and best line is by way of Troy and Albany to both, and when New York is more than 50 miles nearer to these cities than is Boston. But why should the trade and travel from the Great Western in Canada come on to Lake Ontario at all? If it does, it must come to Oswego instead of Ogdensburg. The only effect of coming on to the lake is to produce delay. To lose time. To make more change necessary. In short, to follow the line of interruption, instead of the regular straight forward way that we all like to pursue. There is no danger of its being diverted from the railroad at Hamilton. Look at the map, and see that Hamilton, Niagara Falls, Rochester and Albany are in direct range. There is not the smallest reasonable probability of diversion. Every consideration of interest to the city of New York, to the proprietors of the central line of railroad, and to the traveller, favors the construction of the Canada road, and its connection with the central line in our State. The writer has had his attention turned to this, by an article in the Railroad Journal of December 6th, signed "Observer." The erroneous views presented in that article, need the corrections of fact here presented. The results will follow legitimately from the facts. In another communication, he may be inclined to notice more particularly the railroad now progressing from this city to Niagara Falls.

Rochester, December 15, 1851.

B.

**Railroad from the Gulf of Mexico to Lake Superior.**

An effort will be made this winter to secure to a line of railroad from Chicago, via Woodstock, Illinois, and Fon du Lac, Wisconsin, to Lake Superior, a grant of land similar to that given to the Mobile and Chicago line. Petitions for this object are being circulated all over the northern part of Illinois, and throughout Wisconsin.

The above is an excellent idea, and we sincerely hope it will be carried out. We must have a railroad to the great interior sea of Superior, or the resources of the vast region of country dependent upon it can never be properly developed. At the present time, all access to it by water is prevented by ice. With a railroad it would, as it were, be brought to our very doors. Think, then, of a straight line of railroad from the Gulf of Mexico on the south, to the *Ultima Thule* on the north, Lake Superior! There is sufficient strength in the very idea of such a line, to secure its construction. The general government would lose nothing, but gain infinitely by aiding this project, while the public good would be equally promoted. We go in for the Gulf of Mexico and Lake Superior railroad.

**Virginia Central Railroad.**

We learn from a recent report of the President that the completion of the road, commonly called the eastern extension, from the junction to Richmond, has been attended with very favorable results.

The receipts for the nine months ending 1st October, 1851, were \$117,703 63, whilst those of the same period for the preceding year were only 69,306 68 dollars, being an increase of 48,396 95 dollars. The report states that the receipts would have been greater, but the increased freight which could have been obtained on opening the road, was more than was expected, and more than the company was prepared to accommodate. The receipts of the first twelve months after opening the road to Richmond, supposing the fourth quarter of the present year to be equal to the average of the three first, are estimated at 156,937 17 dollars.—The receipts for transportation for the year ending 30th September, '50, were 91,078 83 dollars, and the receipts for transportation for the year ending 30th Sept., '51, were 143,801 64 dollars, being an increase of 52,722 81.

The profits for twelve months, from October first, '50, to October first, '51, were 64,986 86, being nearly 7 per cent on the whole capital employed which was 996,087 35 dollars.

The work on the road west of Charlottesville is progressing very well. The whole line to the town of Staunton is under contract. More than half of the graduation, including bridging and masonry, is now completed, and another section may be expected to be in operation before the winter sets in. The tunnel at Rockfish Gap, notwithstanding the reports to the contrary, is likely to be completed in three years from this date. The rock is very hard and compact, but that fact will not delay its ultimate completion, as the usual arching with brick will be rendered unnecessary. While the tunnel at Rockfish Gap is under progress of construction, the rails between Waynesborough and Staunton, will be laid, and a portage across the mountain be resorted to.

It is also proposed to relay the road from the junction to Gordonsville with the U rail. The great addition of tonnage which has already been received, and the still greater amount which may be anticipated from the extension to Staunton, renders this measure necessary. The cost of relaying the road will be amply repaid by the increase of business that will result from it.

We find in the engineer's report an account of the surveys of the different routes between Staunton and Covington. The two principal routes are by way of Jenning's Gap and Buffalo Gap. The former was surveyed by Mr. H. D. Whitcomb, and the latter by Mr. E. P. Goddard.

The length of the Jenning's Gap route from Staunton to near Clifton Forge was 64 1/4 Miles. The Buffalo Gap to the same point was 58 1/4 "

Difference in distance ..... 6 "

The Buffalo Gap route being 6 miles the shortest was adopted, and on being re-surveyed, a satisfactory result was obtained. It has "surrendered" to seventy feet grades going east, and eighty going west. The cut at the summit being only 40 feet, the 80 feet grade going west has curves of large radii.

The estimated cost of the Buffalo Gap route for grading and masonry, for 35 miles west of Staunton, is 378,000 dollars, or 10,800 dollars per mile. The engineer hopes to have this section ready to

let by the first of December, and the whole line to Covington by the first of March.

Length of the road from Richmond to Staunton.....	137 Miles.
Finished and in operation.....	106 "
Unfinished.....	31 "
The whole distance to Covington will be.....	200 "

**Lake Ontario, New York and Boston.**

Your correspondent, Observer, in the 49th No. of your valuable Journal, truly says, Boston bids high for a preference over New York, by means of her road to Ogdensburgh and her steamers to Hamilton, thus connecting herself with Detroit by the great western (Canada) line of railway.

The interest and national pride of the Canadas will lead them to patronize this route, and the tendencies of the Toronto and Lake Huron road, as indeed of all of the Canada improvements is to foster the same interest. But it is the commercial importance of Lake Ontario that visits every movement upon her borders with such great interest.—Her ultimate commercial importance is one of the most interesting problems yet to be solved, situated much nearer to the Atlantic than any of the other great lakes; the vast regions lying on her northern side; the great valley of the lakes extending to the west of her, and draining the fertile regions east of the rocky mountains, and the favorable surface of the ground for building roads to Lake Huron, Michigan, and indeed any road running west in a line parallel with the course of the valley, give to her a position, which, although it has been partially overlooked in the settlement of a new country, will yet be felt in the building up of cities and in contracting our lines of internal commerce.

This is the first lake that is open to the direct competition of the great Atlantic cities. So long as this remains unoccupied, New York enjoys the commerce of the west through Lake Erie. No Atlantic city can come into direct competition with the line there. But let Boston aided by the Canadas, establish herself in the commerce of Lake Ontario, and extend her shorter roads west, and, New York would be compelled to meet Boston here, or surrender the sceptre of our northern internal commerce. Boston sagacity has taken the initiative and is courting the present powers in Canada. But New York has advantages that may yet more than balance the advantage on the start. Boston is 400 miles from Ogdensburgh. New York is less than 300 miles over the Legget's Gap and the contemplated Syracuse and Binghamton railroads, from Oswego, which has another 100 miles of lake and river advantage over Ogdensburgh. Boston is now diverting a large amount of business, but I trust that New York will not sleep while interests of such magnitude are at stake.

H.

**Pennsylvania Railroad.**

This road was so far opened on the 10th instant as to leave only 28 miles of staging from Philadelphia to Pittsburg. The time between the two cities will be 24 hours. The Portage will be passed in the day time. The supply pipes for the stationary engines on the inclined planes of the Portage railroad have been sunk beyond the reach of frost, so that there will be no difficulty in working the road all winter. The express train will leave Pittsburg at half-past seven A.M., and arrive in Philadelphia the next morning, and Philadelphia in the evening, and arrive at Pittsburg the next evening. This will be a most popular route to the east, and must do a great business.

**Virginia.**

**Virginia and Tennessee Railroad.**—We are indebted to the Lynchburg Virginian for the following abstract of the report of the President of this road, in advance of the published report of the company.

The President commenced his clear and concise report by stating that the petition to the stockholders of the James river and Kanawha company for reduction of tolls upon the iron necessary for the road, to the lowest grade, has been unsuccessful; that the difficulty between the Board of Public Works and the company, as to the constitution of the directory, had been settled by the resignation of Col. Thos. J. Boyd, a director appointed by the stockholders, and the introduction of Joseph Wilson, Esq., on the part of the State—and here the President most justly complimented Col. Boyd, for his 'untiring devotion' to the interests of the company, thereby entitling him to the gratitude of the stockholders—that the board had purchased the property of the Lynchburg Manufacturing company, at a cost of \$17,078, and thereby secured additional depot room and facilities which were indispensable to the operations upon the road—that the finances of the company were represented as follows: whole number of shares held by others than the State, 9,674, and by the commonwealth 1,125, amounting in all to \$2,092,400. The balance reported in the treasury at the last annual meeting was \$87,265 35. The amount received in cash and 6 per cent bonds is \$836,919. The disbursements of the current year have amounted to \$704,196 90, leaving in the treasury a net balance of available funds, at the end of the fiscal year, of 219,988 05 dollars—that 35 dollars per share had been called in during the year—that since the close of the fiscal year, 30th September, individual subscriptions had been increased 47,500 dollars, making subscriptions by others than the state 1,014,900 dollars; a corresponding subscription on the part of the State of 3-5ths would be 1,522,350 dollars, making together 2,537,250. In addition to this, the counties of Washington and Smyth, have by a vote of the people, determined to take as county subscription, 53,400 dollars, which will draw from the State 80,100 more, making a gross addition to the means of the company of 133,500 dollars; requiring only 131,100 dollars more of individual subscription to complete the capital stock of 3,000,000 dollars.

The road is fast being graded between Salem and Wytheville; a few light sections only remaining to be let, which can be finished before wanted.

"The board (continues the President) have steadily pursued the instructions given by the stockholders, at their second annual meeting, and have done all that sound discretion would permit. Few works in this country have ever progressed more rapidly, and everything has been done that was necessary to make the work perfect and durable."

In pursuance of the settled policy of the company, a letting has been advertised to take place at Wytheville, of so much of the work between that place and the Tennessee line, "as the condition of the finances will permit."

The survey of a branch down New river, shows very favorable results; so much so, that if a road be constructed to the mouth of the Greenbriar, it can carry the tonnage destined to Richmond, against all competition from other roads, "so that even if other interests should require—and the State should authorise a road between these points, passing through Staunton, it would not diminish

the necessity for the branch proposed, nor effect its value." A recommendation is therefore made by the President to apply for authority to construct this branch with others to Guyandotte and Point Pleasant—the stock, expenses and dividends to be kept separate from those of the main stem. The President closes his interesting report by saying, that every possible attention has been paid to the interests of the company, by those who have been entrusted with its management—he justly characterizes it as a work of great magnitude and State importance, and one well "calculated to afford relief to the wants of our common country, and elevate the destinies of our beloved old Commonwealth."

#### Pennsylvania.

**Allegheny Valley Railroad.**—Great interest is felt in Pittsburgh in reference to this project. We understand that Gov. Johnson is to be placed at the head of it. The distance from Pittsburgh to Olean it is stated, will not exceed 180 miles. For a greater part of this distance the line traverses the great Bituminous coal field of Penn., and a most fertile and productive country. At Olean it will connect with the Erie and the Gennessee Valley railroad. The route is favorable, and can be built at a low cost. It will immediately be constructed, and operations commenced at an early day.

The Pittsburgh Gazette urges the people of that city to take immediate measures to secure the charter, and sees great danger threatening the enterprise. And to the interests of Pittsburgh, in the proposed road from Blairsville to the town of Indiana. In reference to this project it says.

Those who read the late report of the Central railroad company will remember that it speaks of a branch road extending from Blairsville to the town of Indiana. We have recently ascertained, however, that the stock is nearly all taken, and that it will soon be made. But that is not all. The next step is to extend the road northwardly from Indiana to the Mahoning, and down that stream to the Allegheny river. Now what will be the effect of all that? The Hempfield route extends from Wheeling to within a few miles of Blairsville.—Blairsville is but 15 miles from Indiana, and Indiana is within 20 miles of Mahoning. Thus we see that a man could be on the Mahoning from Wheeling, by that route, in less time than he could reach Pittsburgh in a steamboat. We tell the people of this city, that unless they arouse from their lethargy they will very soon find themselves stranded high and dry. We have, it is true, the shortest and best route by which to reach the valley of the Allegheny, and, through it, Western New York; but what good will that do us, unless we avail ourselves of it? We have let the New Yorkers get around us on one side, and the Baltimoreans will soon be round us on the other; and now, by the Hempfield and the Blairsville and Indiana roads, we are likely to lose a part even of the valley of the Allegheny. Pittsburgh has lost enormously by her slowness.

#### Green Bay and Lake Superior Railroad.

At a regular meeting of the stockholders of the Green Bay and Lake Superior railroad company, held in this city, yesterday, Jonathan Child, Alvah Strong, John Thompson, Jr., Esquires, Hon. Nicholas E. Paine, and Hon. Samuel L. Sheldon, of this city, Heman B. Ely, of Cleveland, Ohio, and John F. Ely, of Iowa, were chosen directors. Heman B. Ely was subsequently elected President of the company, and John Thompson, Secretary and Treasurer. These gentlemen are well known to the public.

We understand that it is the intention of the company to place a corps of engineers upon the work immediately; and that the northern portion of the road will be put under contract early in the spring, and completed next season. By this means the resources of the mineral region will be made available.—*Rochester Democrat.*

#### Tennessee.

**Nashville and Chattanooga Railroad.**—This road is making rapid progress, and it is expected that by the first of January 70 miles will be completed and in operation.

The Tennessee papers state that "the effect of the construction of this road upon the prosperity of Murfreesboro' and Shelbyville has exceeded the most sanguine expectations of the property holders of these flourishing towns. Property in their several limits has appreciated 50 per cent., and in some instances as high as 100 per cent.; an impulse has been given to manufacturers; an influx of emigration of mechanics—the class of population from which all the permanent prosperity of a town is derived—has set to them; and turnpikes are projected through counties at a distance from the road, and their construction will serve as feeders to supply the nourishment and support the continued growth of the towns to which they tend."

"This remarkable change has not been confined to the towns, but the entire face of the country, along the track of the railroad, has exhibited the transforming influence of this great renovator. To say nothing of the appreciated value of land, we saw evidence of the effect which the increased value has had in bringing into cultivation lands which previously to the construction of the railroad, were considered waste and unprofitable."

#### York and Cumberland Railroad.

The business of this road continues to show a steady increase. The two months since the annual report present the following receipts for passengers and freight, viz:

	Passengers.	Freight.	Total.
September.....	\$1,369.84	873.42	2,243.26
October.....	2,310.41	1,163.80	3,474.21
Increase.....	\$941.57	\$290.38	\$1,230.95

The number of tons freight carried in September was 2,310; October, a little over 3,000—increase, 690 tons.

Almost all the freight over this road passes to and from Baltimore, and accordingly affects the trade of our city and the Baltimore and Susquehanna railroad in a corresponding ratio.

#### Tennessee.

A railroad convention was held at Sparta, Tennessee, on the 1st of December, 1851, and adjourned to meet there again on the second Saturday of January, 1852. A circular from a committee of the convention, which is before us, states that great interest has been awakened in the interior of Kentucky and Tennessee, to the importance of opening outlets north and south for their productions, and of a direct line of railway from Cincinnati through the interior of Kentucky, skirting the base of the Cumberland mountains, passing through Tennessee and Alabama, to Mobile. Attention is asked to the important fact, that the most direct line for a road to connect Mobile with Cincinnati, will afford us the shortest, cheapest, and best means of communication with Charleston and Savannah. On the route indicated, works are projected and progressing, leaving to be finished but 120 miles of road "to perfect the great chain of northern and southern connection."

#### Improved Railroad Truck.

Mr. Abram Snyder, of Hawley, Wayne county, Pa., has invented an improved truck for railway cars, which consists in having three pairs of wheels to one truck, and each pair of wheels to be placed in a frame, and three frames being connected by a joint in such a way that each frame will conform to the curvatures or inequalities of the road without causing any strain upon the others. He employs cast iron frames which cannot be employed in the ordinary trucks. On the upper surface of the track, and over the joint, is placed a circular rim, which serves as a guide to the pair of wheels in the centre of the frame. This guide prevents the centre wheels from getting off the rails, and it also is acted upon by the front frame, so that the centre wheels are assisted in turning or conforming to the curvatures of the road with as little friction as possible.

#### Important Decision.

In the United States District Court, held in Boston, Judge Curtis presiding, the case of Salmon Falls Manufacturing company vs. W. W. Goddard, has been on trial for several days past. The suit was to recover the value of three hundred cases of manufactured goods, which plaintiffs contracted to deliver to defendant. The goods were burnt at the destruction of the Maine Depot in Boston. The defendant was notified that the goods were at the depot, but the question being submitted to the Court whether or not this constituted a legal delivery, it was decided that it did not, and the Jury were directed to return a verdict for defendant.—The contract between the two parties specified that the goods should be delivered on board the defendant's vessel.

#### Canada.

**Richmond Railway.**—We understand that the directors have accepted the tender of Messrs. Rigney and Rutherford, of Montreal, for the work on the first division of the road, viz., from Hadlow Cove to the river Chaudiere. The contractors are under engagement to commence immediately—and the long and heavy embankment at the back of New Liverpool will be principally finished this winter.

We learn further that the directors intend making monthly calls of £1 per share, for six months hence, to enable the work of construction to proceed as rapidly as possible this winter, and to be prepared for increased operations in the spring. We hope the shareholders will second the efforts of the directors, and within two years we shall be able to travel with speed and comfort wherever we please.

#### Baltimore and Susquehanna Railroad.

The winter arrangement for the running of the cars on this road, comprising many important changes and facilities, will go into operation on and after Monday next. The express mail train will leave at 7 $\frac{1}{2}$  P. M. running through to Harrisburg in three and a half hours. The morning passenger train will leave at 8 $\frac{1}{2}$  o'clock. The afternoon passenger train will leave at 3 $\frac{1}{2}$  o'clock. On and after the 20th December passengers in the express mail train will be conveyed to Pittsburgh in 22 $\frac{1}{2}$  hours, with only 28 miles of coach riding. We will publish the advertisements giving the schedule of these arrangements on Monday next.

#### East Tennessee and Georgia Railroad.

The Knoxville Register of the 4th inst., says—"that subscriptions of stock in the East Tennessee and Georgia railroad company have been taken in the counties of Knox, Roane, Anderson and Morgan, to the amount of \$165,000. The right spirit is animating the people of Knox county, and it manifested itself on Monday in a most commendable manner. We feel certain now that the necessary amount of stock will be taken; and we feel proud that the people of Knox county are thus nobly coming up to their duty. The citizens of Roane, Morgan and Anderson deserve great praise for the interest they have manifested in the success of the road. They are doing nobly in the way of taking stock."

#### Pennsylvania.

The Union canal is completed to Pine Grove, and the extension to that place is said to be one of the finest works in the State. The three feeders from the water works on the main line to Pine Grove, a distance of some 25 miles, have been enlarged, and upon which is built some 20 or more locks, of the same capacity of the Pennsylvania canal, of cut stone, and in the most approved manner. Their docks and schutes, and other arrangements for shipping coal, exceed anything of the kind in this country. The whole work will be ready for the spring business.

#### Maine.

**Kennebec and Portland Railroad.**—This road has been opened to Augusta, and the regular business trains will soon commence running.

**TO FOUNDRYMEN,  
AND  
Contractors for Iron Castings.**

THE Proprietor of the Rossie Furnace, St. Lawrence County, N. York, having lately erected at their works a Casting House 125x75, with suitable Cupolas, Cranes, etc., and a Machine Shop, furnished with a considerable stock of tools, and a water wheel of 30 horse power—the whole carried out in the most substantial manner—offers the use of these premises, in connection with the sale of Rossie Iron, to manufacturers and contractors for castings and machinery.

There are 2000 tons of hot and cold blast iron now at the works, any part of, or more than which, might be contracted for in connection with the above; and as liberal terms of credit would be extended to parties offering satisfactory security, it is supposed that the conditions contemplated may present no ordinary advantages to persons desirous of a large business on a limited capital.

It may be useful to add that the Cold Blast Iron made at these works is of a very superior quality for Car Wheels.

Rossie is 6 miles from the River St. Lawrence, and connected by a good Plank road all but 1 mile. For further particulars, apply to D. W. Baldwin, Agent, at the works, or at the office of the subscriber, Ogdensburg, St. Lawrence Co., N. Y.

G. PARISH.

December 20, 1851. 61\*

**To Railroad Car Builders and Manufacturers Generally.**

THE Cincinnati, Hamilton and Dayton Railroad Company, at Cincinnati, have ten acres of land adjoining the City and near the Ohio River—their Road running through its center—which they will lease for a term of years, or perpetually, for the establishment of a Car Manufactory, or for any purpose connected with the furnishing of Machinery for Railroads.

The Company have at their Depot grounds, at Cumminsville, about five miles north of the city, six acres of land, eligibly situated for a variety of Manufacturing purposes, which they offer for lease on advantageous terms.

They have, also, on the line of their Road, in the town of Hamilton, 25 miles north of the city, about forty acres of land, situated on the Hamilton Hydraulic Works, where a Water Power can be displayed advantageously, and the same had on favorable terms. This property is also eligibly situated for Manufacturing purposes, and will be sold or leased on accommodating terms.

The above described property is admirably situated for the successful prosecution of the objects referred to, connected as the Road passing through it is with other Railroads built and building into Western and Northern Indiana, and Northern and Eastern Ohio; and the first described land lying near the line of the Cincinnati and St. Louis Railroad.

To skilful and enterprising Car Builders, possessing sufficient capital for the prosecution of that business, the inducements are peculiarly flattering.

For further particulars address, at Cincinnati, S. S. L'HOMMEDIUE, Pres't C. H. and D. R. R.

**New England Car Spring Co.,  
No. 104 Broadway, New York,  
MANUFACTURERS OF  
INDIA RUBBER CAR SPRINGS &  
HOSE,**

Of F. M. Ray's improved form, and dealers in every description of Rubber Goods for Railway purposes.

All Goods manufactured by this company are warranted of the best materials, and the same composition which has established the reputation of F. M. Ray's India-rubber Car Springs.

F. M. RAY, Agent.

**Railroad Iron.**

THE undersigned offer for sale 1000 tons Railroad Iron, (about 56 lbs. to the yard,) now at Brooklyn.

CHOUTEAU, MERLE & SANFORD,  
Oct. 1, 1851. 51 New st.

**To Civil and Mining Engineers and Surveyors.**

A YOUNG MAN having lately completed an engagement of six years with an eminent Civil and Mining Engineer in Scotland, is desirous of a situation in that capacity. Has had considerable experience in the mines of Scotland, and is in possession of all instruments necessary for land and mining surveying. Address A. S., care Mr. D. H. Arnot, 50 Wall St., N. Y.

Dec. 13th. 1m\*

**Notice to Contractors.**

*Virginia Central Railroad.*

SEALED PROPOSALS will be received at the Engineer's Office of the Virginia Central railroad at Staunton, on the 18th day of December, 1851, for the Grading, Masonry, etc., of that portion of the line extending from Staunton to Panther's Gap, a distance of 35 miles. Drawings and specifications of the work may be seen from the 15th to the 18th of December, inclusive.

The best of references will be required. Contractors are requested to state what work they are engaged upon, and when it will be completed.

The Directors reserve the right to accept or reject proposals as they may consider the interests of the company require. The names, in full, of all the parties must be given in the proposals.

By order of the President and Directors.

T. COLDEN RUGGLES,  
Chief Engineer.

**Railroad Instruments.**

THEODOLITES, TRANSIT COMPASSES & LEVELS on a new principle, with Fraunhofer's Munich Glasses, Surveyors' Compasses, Barometers, Chains, Drawing Instruments, etc., all of the best quality and workmanship, for sale at unusually low prices by

E. & G. W. BLUNT,  
No. 179 Water st.

New York, Dec. 1, 1851.

**M. B. Hewson, Civil Engineer,**  
(Open to a New Engagement.)  
Memphis, Tenn.

**LOWMOOR  
LOCOMOTIVE TIRES.**

THE Subscriber, sole agent for the Lowmoor Co., is prepared to take orders for this superior description of tires, which are furnished, bent, welded and blocked to any dimensions, having but one weld, and at a cost to the importer of less than ten cents per pound for the heaviest weights.

WM. BAILEY LANG.  
Boston, November 29th. 1m

**Railroad Iron.**

2000 TONS of an approved pattern 59 to 60 lbs. per lineal yard, now manufactured in England, and ready for immediate shipment, from thence.

Also, 2,500 tons of different patterns in port and expected to arrive within sixty days. For sale by

DAVIS, BROOKS & CO.

28 Beaver Street, New York.

CONTRACTS made for Railroad Iron at a specific price delivered in England, or at port in the United States.

**PREMIUM  
RAILROAD CAR SPRINGS,  
AND OTHER**

**India-rubber Goods.**

TWO Prizes were awarded me last month by the American Institute—one for best Car Springs, the other for best Overshoes. This proves the superiority of the Goods made by me.

HOSE and STEAM PACKING, and all other India rubber goods for Railroad purposes, on hand and for sale cheaper than any other house.

Car Springs, 50 cents per lb. for cash—of the best quality and of all sizes, (Fuller's patent.)

I now give notice that Fuller is the original and true inventor of the India-rubber Spring, and companies who use Springs made by other parties will eventually have to pay me damages. H. H. DAY,

23 Courtland st., New York.

Inventor and owner of 17 I. R. Patents, and the oldest Manufacturer of India-rubber in the U. S.

December 6, 1851.

**To Railroad Companies.**

**H. & F. BLANDY, Proprietors  
LOCOMOTIVE ENGINE WORKS,  
ZANESVILLE, OHIO.**

RESPECTFULLY give notice to Railroad Companies that they are now prepared to furnish Engines of the most approved construction and finish, which, for capacity, speed and durability, are not excelled in this country.

Also, all other Railroad machinery, of both wrought and cast iron, pertaining to the road, stations or machine shops.

Terms as favorable as any other builders in the United States.

The facilities for transportation from Zanesville are as good as from any other point in the Union, having steamboat navigation to the Ohio river, and Canal boat and Railroad connection with the Ohio river and Lakes.

One of their Engines, the "MUSKINGUM," on the Central Ohio Railroad, may be referred to, or others, at their works. The attention of those interested is invited, and orders solicited.

Oct. 30th, 1851.

**To Contractors.**

**OFFICE OF THE E. AND ILL. R. R. CO.,  
Evansville, Oct. 23d, 1851.**

SEALED PROPOSALS will be received at this office from the 13th to the 23d day of December next, for the grubbing, grading and bridging of that portion of the Evansville and Illinois railroad, lying between Princeton and Vincennes, a distance of 24 miles.

This work includes two bridges; one across White River, about 600 feet, the other across Patoka, about 200 feet.

Contractors will state what proportion of the Stock of the Company will be taken in payment.

Plans, profiles and specifications, will be exhibited, and all requisite information given at the Office of the company in Evansville, on and after the 13th day of December next. By order of the Board of Directors.

SAM'L. HALL,

President.

**RAILROAD SPRINGS.**

**Fuller's India-rubber Springs.**

THESE are now made in our own Factory, of the best materials. Each spring is guaranteed to perform the required work. Purchasers guaranteed against adverse claims.

Car Builders will save great expense by calling at the office of the Company.

23 Courtland St., New York.

**To Railroad Companies.**

THE undersigned has discovered and patented an imperishable, cheap, and sufficiently elastic substance, to be introduced between the sill and rail, so that the stone sill can be used in place of the wooden sill: entirely overcoming that rigidity where the rail is laid directly on stone. Address J. B. GRAY, Philadelphia.

July 10, 1851.

4m

**Railroad Iron.**

THE undersigned are prepared to enter into contracts now at specific prices, to deliver Railroad Iron during the coming Winter and Spring, free on board at the shipping ports in Wales, or at ports in the United States.

CHOUTEAU, MERLE & SANFORD,  
Sept. 30, 1851.

No. 51 New st.

**To Contractors.**

**OFFICE WILMINGTON & MANCHESTER R. R. CO.,  
Marion C. H., S. C., October 18, 1851.**

SEALED PROPOSALS will be received until the 15th of December next, for the Piers of a Bridge across the Great Pee Dee River. The job comprises four piers, one a very heavy pier for a draw, and the sinking of cast iron hollow piles by "Dr. Pott's Pneumatic Process," for forming foundations. The plans and specifications of the piers will be exhibited by the Secretary of the Company at Marion Court House, and by the Resident Engineer, L. J. Fleming, Esq., at Wilmington, North Carolina.

WALTER GWYNN,

Chief Engineer Wilm. and Man. R. R.

November 1.

Richmond, Va.

**Bridges & Brother,**  
DEALERS IN  
RAILROAD AND CAR FINDINGS,

64 Courtlandt street, New York.

Having established a general Depot for the sale of articles used in the construction of Railroads, Locomotive Engines and Railroad Cars, we would invite your attention to our establishment. We have already in store a good assortment of CAR FINDINGS and other articles used in the trade, and feel justified in saying, that should you desire anything in our line, we can supply on terms perfectly satisfactory, and in the event of your desiring to order, you may feel assured that your terms will be as good as though you were here to make your own purchases.

Among our goods may be found Railroad Car Wheels, Axles, Jaws and Boxes, Nuts and Washers, Bolts, Brass Seat Hooks and Rivets, Window and Blind Springs, Lifters and Catchers, Door Locks, Knobs and Butts, Ventilators and Rings, Car Lamps, Coach and Wood Screws, Jack and Bed Screws and Babbitt's Metal; also Plushes, Damask, Enamelled Head Linings, Cotton Duck for Top Covering in width sufficient without seams, Curled Hair and all other articles appertaining to cars.

Also a new and valuable CAR DOOR LOCK, well adapted to the Sliding Door. This is decidedly the best yet introduced.

**LOCOMOTIVE ENGINE LANTERNS**, the best article made in the country. Whistles, Gauge and Oil Cocks, Hemp Packing, American, Russian and Italian. We are also agents for Lightner's Patent Journal Box for Car Axles, that invaluable invention, for the economical use and preservation of Car Journals.

Coach VARNISH and Japan of the best quality. We would also offer our services for the purchase as well as for the sale of goods on commission.—Both members of our firm have had the experience of many years in the manufacture of Railroad Cars, and our Senior was a member of the well known house of DAVENPORT & BRIDGES, Car Manufacturers, Cambridgeport, Mass. With our knowledge of matters pertaining to Railroads, we feel quite confident in giving satisfaction to both buyer and seller, and hope that through assiduity and attention to any business entrusted to our care we shall merit a continuance of confidence and patronage.

**BRIDGES & BROTHER.**

July 22, 1851.

**Lightner's Patent Axle Boxes.** THE Undersigned are Agents for, and offer for sale, Lightner's Patent Axle Boxes, for Railroad Cars and Tenders, which have, by thorough experience, been demonstrated to be one of the most valuable improvements ever introduced in Locomotion. The saving effected in oil alone, will in a few months pay the first cost of these boxes, independent of other advantages. They are now in use upon the following, among other roads, viz:

Boston and Worcester, Boston and Providence, Boston and Fitchburg, Nashua and Lowell, Providence and Worcester, Northern, N.H., Cheshire, Manchester and Lawrence, Concord, N.H., Concord and Claremont, Ogdensburg, (Northern, N.Y.) Stonington, New London Willimantic and Palmer, New Jersey Central, New Hampshire Central, Worcester and Nashua, Fitchburg and Worcester, Connecticut and Passumpsic, Lowell and Lawrence, Salem and Lowell, Wilton Branch, Newburyport.

Below will be found the certificates of a number of gentlemen, whose opinions will be good authority in every part of the country.

Office Boston and Prov. R. R.,  
Boston, Dec. 28, 1849.

**Mr. JOHN LIGHTNER,**

Sir.—It affords me pleasure to say, that after two years' trial of your boxes, I am fully and entirely satisfied of their superiority over any other pattern we have used. This superiority consists in economy of oil and freedom from "heating." I have tried every pattern of box in use, of any note, and do not hesitate to say, that you have devised one which in every respect combines greater advantages than any other within my knowledge, these advantages are so manifest, that I am fitting up all

our cars with your boxes, as fast as practicable.

Annexed, is a statement of an experiment with your boxes, the result of which may be of use to your interests.

Ten passenger cars, running 72 wheels, fitted up with Lightner's boxes used 41 $\frac{1}{2}$  pints of Patent Oil, at 50 cents per gallon, ran 43,099 miles, equal to 5 1/8 pints per wheel for 43,099 miles. Speed, 30 to 40 miles per hour.

Very respectfully yours,

W. RAYMOND LEE, Supt.

I have examined the above statement of Mr. Lee, and fully concur with him in his opinion in the superiority of Lightner's box.

GEORGE S. GRIGGS,  
Supt. Machine Shop B. & P. R. R.

Boston, July 26, 1849.

This is to certify that J. Lightner's axle boxes for railroad cars and locomotive tenders, have been in use on the Boston and Worcester railroad one year, and I unhesitatingly pronounce it, in my opinion, the best and most economical one in use, requiring less oil, of easy application, not susceptible of derangement, as in most kinds in use. When requiring repairs or renewal, the same may be done in one-fourth of the time usually occupied for that purpose. The box requires oiling not oftener than once a month—is kept quite free from dust, and consequently wears much longer than those generally in use.

D. N. PICKERING,  
Supt. Motive Power, B. & W. R. R.

Office of Boston Locomotive Works, {  
December 12th, 1849.

The Boston Locomotive Company have been using J. Lightner's patent axle boxes under the tenders of their engines for several months, and find them more highly spoken of by the railroad companies that have used them in regard to economy in the use of oil, their durability and their ease of adjustment, than any other boxes which they have used. We therefore do not hesitate to recommend them to all railroad companies.

DANIEL F. CHILD,  
Treas. Boston Locomotive Works.

Taunton Locomotive Works, {  
Taunton, July 7, 1849.

MR. H. F. ALEXANDER,  
Dear Sir,—Your favor of yesterday came to hand in which you ask what success we have met with, in using Mr. Lightner's patent box for cars, engines, &c.

We have put it in use on the Boston and Providence railroad, New Bedford and Taunton Branch railroad, Central railroad, N. J., Norfolk County, Rutland and Burlington, and as yet we have not had one complaint from them; and from what we have used of it, and witnessed, we do not hesitate to say that it is superior to anything in use for that purpose. It is simple in its construction, and easy of access, and the reservoir is held close to the shaft, and the oil and journal is perfectly secure from dust; they will run from four to six weeks without replenishing the oil. The brass in the box is changed very much easier than by any other plan that we have seen.

Very resp. yours,  
W. W. FAIRBANKS, Agent.

Office Providence & Worcester R. R. Co., {  
Providence, Dec. 17th, 1850.

H. F. ALEXANDER, Esq.,  
Sir.—The "Lightner patent boxes" for cars and locomotives have been in use under a portion of the passenger cars and engines of this company for upwards of two years, and have given very great satisfaction.

Though combining many excellent qualities, their great superiority consists in the economy of oil.

The result of experiments upon this road shows the consumption of oil by the use of this box, to be not more than one sixth part the quantity consumed by the use of the common box.

With the common box, eight passenger cars, 64 wheels, running 90 miles per day, consumed in 12 months 520 gallons of oil, being an average of 8 $\frac{1}{2}$  gallons per wheel per annum.

With the Lightner box the same cars running the same number of miles per day, during the same space of time consumed 73 $\frac{1}{2}$  gallons of oil, being an average of 1 $\frac{1}{2}$  gallon per wheel per annum.

So manifest are its advantages over any other box used by this company, it is intended to place it under all our cars as soon as practicable.

Besides the saving of oil, as they afford complete security from dust, we think them more durable than any other box in use.

Another advantage resulting from the use of this box is, cars run more easily than with the common box. The saving in fuel which it would effect, would of itself, we think be a sufficient inducement to use this box in preference to any other known to us.

Very respectfully,

ISAAC H. SOUTHWICK, Supt.  
JOHN B. WINSLOW,  
Supt. Machine Shop, P. & W. R. R.

Cambridgeport, Apr. 5th, 1851.

H. F. ALEXANDER, Esq.

Sir.—This may certify that I have been engaged in the manufacture of railway cars since 1834, and have built for the different railroad companies cars of all descriptions to the amount of three millions of dollars, and have used on the above cars all kinds of journal boxes, and find that none give better satisfaction than the "Lightner patent box," both on account of the saving of oil and the arrangement for taking out and re-placing the composition by means of the sliding key, and other conveniences which no other box possesses.

Yours respectfully,  
CHARLES DAVENPORT.

Worcester, March 17th, 1851.

H. F. ALEXANDER, Esq.

Dear Sir.—This is to certify that I have been for some years past engaged in building cars, and that I have tried most, if not all of the patent boxes, and have found Lightner's patent superior to all others as far as the saving of oil is concerned, also the ease with which they are fitted and exchanged in case they get out of order.

For the last three years, I have put them under all of the cars I have built, and in every instance they have given the most entire satisfaction.

Yours truly,  
OSGOOD BRADLEY.

Office Union Works, So. Boston, {  
May 23d, 1851.

This certifies that I have applied Mr. J. Lightner's patent axle boxes to my locomotives and tenders for the past two years. I consider them superior to all others,—economical in their use, and possessing many important advantages not found in any other boxes.

SETH WILMARTH.

Office 15, R. R. Exchange, Boston, {  
June 1, 1851.

This is to certify, that we have known the success of Lightner's patent journal boxes upon various roads in New England the past three years, and have been led to examine their peculiar construction.—We are well satisfied of their merits, and have adopted them upon our small gravel cars, and take pleasure, as we ever have done, in recommending their use upon all roads where we are employed in the construction.

GILMORE & CARPENTER,  
Contractors.

Amoskeag Manufacturing Co. Machine Shop, {  
Manchester, May 31, 1851.

H. F. ALEXANDER, Esq.

Dear Sir.—We are using the Lightner box on all the engines and tenders we build, and we are satisfied that it is the best box in use, and recommend the same to all those who purchase engines at our works.

Yours respectfully,  
O. W. BAYLEY, Agt.

This is to certify that the Fitchburg railroad company having become satisfied of the superiority of J. Lightner's patent Axle Boxes for Railway Cars and Locomotive Tenders adopted the same

and are bringing them into general use upon their road.

One year's experience with the above improvement, has fully convinced me that there has never been anything offered to the public for that purpose which possess such intrinsic value; in fact, this is an improvement which seems to overcome all the difficulties found in all the various kinds now in use. It possesses very many advantages over all others: Some of which are [first] the first cost is much less than that of most boxes in use. [Secondly] 75 per cent is saved in oil; one gill applied to each Journal once a month, or one quart to an eight wheel car, is all these boxes require per month. [Thirdly] no dust can gain access to the Journal, which is constantly lubricated with clean oil; hence the saving in repairs of Journals and composition bearings, is a matter of importance. [Fourthly] its construction is truly simple—not complicated, having nothing liable to become loose by constant and severe service. [Fifthly] for convenience there is nothing which approaches this improvement. The composition bearings may be removed from the Journals of an eight wheel car, by one man, and returned, or duplicates, in twenty minutes, while under the car: the same would require two men, at least half a day with other boxes in use. The trucks and wheels using these boxes, are free from oil and dirt, usually seen upon all railroad cars, at great expense to the corporation.

NATH'L JACKSON.

Supt. Car Building and Repairs, F.R.R. Co.

Boston, March 9, 1849.

I hereby certify, that I have examined a box for Car Journals, invented by Mr. Lightner of Roxbury, Mass., and I have thought so well of it that I have adopted it on our railroad, I have known of its success on other roads.

S. M. FELTON,  
Supt. F. R. R.

Office of the Central R. R., N. J., }  
Elizabethtown, May 1849.

H. F. ALEXANDER, Esq.,

Dear Sir:—Your favor, [wishing to be informed how we liked Lightner's patent axle boxes for R.R. Journals,] has been duly received; in answer we would say, we have used the boxes on Locomotive tenders one year, more or less, and on our cars some six months. I consider them the best boxes in every respect, I have ever used, or even seen used on any other roads—for safety, durability and the economy pertaining to all the details connected with the boxes and Journals of R. R. Car wheels; and we shall adopt them upon this road.

Yours Respectfully,

JOHN O. STEARNS.  
Supt. Central Railroad Co., N. J.

Manchester, N. H., Nov. }  
1st, 1850.

H. F. Alexander, Sir,

I have used "Lightner's Boxes" under all the Cars of the Manchester and Lawrence railroad, and feel no hesitation in saying that I think them to be the best boxes now in use.

Yours, &c.,  
THEODORE ATKINSON, Agent.

Cheshire R. R. Office, Keene, }  
March 5th, 1851.

Mr. H. F. Alexander,

Sir.—Lightner's Patent Boxes have been used on the Cheshire R. R. about a year, and have given the highest degree of satisfaction.

All the Passenger Cars now in use, and a considerable number of Merchandise Cars are furnished with them, and they will take the place of the Common Boxes on all the cars as fast as circumstances will permit.

Very Resp't.

L. TILTON,  
Supt. Cheshire R. R.

Boston and Worcester Railroad, }  
Boston, April 1st, 1851.

H. F. Alexander, Esq.,

Dear Sir.—Lightner's Patent oil saving box for railroad cars, has been adopted by this corporation; we are taking out the common and substituting the

Lightner's at the rate of fifty boxes per month; it will soon take the place of all others, as it is decidedly preferable to any heretofore used by this corporation.

G. TWITCHELL, Supt.

Statement of amount of oil used on 32 8-wheel freight cars, on the Boston and Providence Railroad (with Lightner's Boxes) from March 10, 1849, to February 27, 1851, and upon 12 8-wheeled passenger cars from September 8, 1849, to February 27, 1851.

#### FREIGHT CARS.

Amount Oil.	No. months.	Amount Oil.	No. months.
1.—21 pts.	10	17.—23½ pts.	14
2.—19 "	6	18.—23½ "	11
3.—25 "	13	19.—36 "	21
4.—18 "	7	20.—22 "	10
5.—22 "	12	21.—38½ "	24
6.—24 "	13	22.—29 "	23
7.—20 "	11	23.—35½ "	23
8.—21 "	11	24.—37½ "	23
9.—23½ "	10	25.—51 "	23
10.—21 "	9	26.—31½ "	24
11.—20 "	9	27.—28½ "	23
12.—21½ "	11	28.—36 "	23
13.—19 "	8	29.—50½ "	24
14.—25½ "	17	30.—50 "	23
15.—20½ "	10	31.—41 "	23
16.—31 "	18	32.—39½ "	23
Total, 925½ pts.		510	

#### PASSENGER CARS.

1.—19½ pts.	18	7.—30 pts.	18
2.—25½ "	18	8.—25½ "	18
3.—33½ "	16	9.—29 "	18
4.—19 "	15	10.—46½ "	17
5.—15 "	15	11.—9 "	9
6.—22 "	18	12.—65½ "	17
Total, 340 pts.		197	

Averaging 1 4-5 pints of oil for freight, and 1 7-10 for passenger cars per month only!

All orders and enquiries promptly attended to.

BRIDGES & BROTHER,  
No. 64 Courtlandt st., New York.

July 25, 1851.

#### TRAUTWINE ON R. R. CURVES.

By JOHN C. TRAUTWINE, Civil Engineer,  
Philadelphia, Pa.

JUST published, accompanied by a Table of Natural Sines and Tangents to single minutes, by means of which all the necessary calculations may be performed in the field.

This little volume is intended as a field-book for assistants; and will be found extremely useful, as it contains full instructions, (with wood cuts) for laying out, and adjusting curves; with Tables of Angles, Ordinates, etc., for Curves varying from 13 miles, down to 146 feet Radius.

A portable Table of Natural Sines and Tangents to minutes, has for a long time been a desideratum among Engineers, independently of its use in laying out curves.

The volume is neatly got up in duodecimo; and handsomely bound in pocket-book form.

Sold by Wm. Hamilton, Actuary of the Franklin Institute, Philadelphia. Price \$1.

Also, "Trautwine's Method of Calculating Excavation and Embankment."

By this method, which is entirely new, (being now made known for the first time) the cubic contents are ascertained with great ease, and rapidity, by means of diagrams, and tables of level cuttings. Thin octavo; neatly half bound, \$1. For sale by Wm. Hamilton.

June 28, 1851.

#### Railroad Iron.

CONTRACTS made by the subscribers, agents for the manufacturers, for the delivery of Railway Iron, at any port in the United States, at fixed prices and of quality tried and approved for many years, on the oldest railways in this country.

RAYMOND & FULLERTON, 45 Cliff st.

CORROSIVE SUBLIMATE.

THIS article now extensively used for the preservation of timber, is manufactured and for sale by POWERS & WEIGHTMAN, manufacturing Chemists, Philadelphia.

Jan. 20, 1851.

#### To Chief Engineers, Directors of Railroads, Canals, etc.

A Civil Engineer and Surveyor, who has been professionally engaged under the British Government, East India Company, etc., is desirous of obtaining employment as an Assistant. No objection to the South or West. Address for one month to C. E. & S., American Railroad Journal office.

August 16, 1851.

#### To Engineers.

A NEW WORK on the Marine Boilers of the United States, prepared from authentic drawings, and illustrated by 70 engravings, among which are those of the fastest and best steamers in the country, has just been published by B. H. Bartol, Engineer, and is for sale at the store of D. APPLETON & CO., Broadway

September 1, 1851.

#### Pneumatic process for making Foundations for Bridges, Piers, etc.

THE Attention of Engineers, Contractors, and Bridge Builders, etc., is directed to this method of forming secure foundations. Hollow Cylindrical piles from 8 inches to 10 feet in diameter may be sunk through sand, mud, clay, etc., to any required depth, and filled with concrete or masonry.

The efficacy and economy of the process has been demonstrated in the construction of numerous permanent works, at a much less cost than the use of any other method. (See evidence in Parliamentary enquiry, Railroad Journal, April 19, 1851.)

Contracts made, or licenses granted for the use of the invention in any part of the United States, by

CHARLES PONTEZ,  
34 Liberty street, N. Y.

#### LOWMOOR IRON.

THE LOWMOOR IRON COMPANY having appointed WM. BAILEY LANG their sole agent in America and Canada, he is now prepared to receive and execute all orders for Railway Tire Bars, bent, welded, and blocked Railway Tires, Axles, Piston Rods, and Boiler Plates. Also, plain, angle, rivet and every other description of Lowmoor Iron.

All communications respecting the above are requested to be sent to Wm. Bailey Lang, at his Steel Warehouse, No. 9 Liberty Square, Boston, or to the Lowmoor Iron Works, Bradford, Yorkshire, England.

30th Sept., 1851.

#### RAILROAD SPRINGS. Fuller's Patent India-rubber Springs.

PRICE reduced to 50 cents per pound. The owners of this Patent now manufacture the Springs in their own Factory, and guarantee that each spring shall perform its required duty.

Purchasers guaranteed against adverse claims. They may have full confidence in the working qualities of the springs.

The suits brought against Ray & Co., will soon be brought to issue, and we await the result with satisfaction, having full confidence in the pure administration of the Laws.

The long advertisements put forth by Ray & Co. about prior invention of the spring are worthless he has not proved prior invention, and cannot sustain his patent in a Court of Law.

For the owners of Fuller's Patent,  
G. M. KNEVITT,  
23 Courtlandt st., New York.

October 7, 1851.

#### Railroad Iron.

THE undersigned, Agents for British Manufacturers, continue to sell Railroad Iron of the best quality, and of any weight or pattern required; deliverable at any part of the United States or Canada.

They have now on hand, ready for delivery New York:  
2,000 tons of an approved pattern, weighing about 60 lbs. to the yard.

WM. F. WELD & CO.,  
42 Central Wharf, Boston.

